DEPARTMENT OF THE ARMY
UNITED STATES ARMY ENGINEER SCHOOL
FORT LEONARD WOOD, MISSOURI 65473-6600

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REPLY TO
ATTENTION OF

MEMORANDUM OF AGREEMENT
BETWEEN
THE U.S. ARMY ENGINEER SCHOOL
AND
THE OFFICE OF THE PROJECT MANAGER
MINES, COUNTERMINE AND DEMOLITIONS

SUBJECT: Approval of System MANPRINT Management Plan (SMMP) for the Bridge and Road Munition (BRM)

1. We jointly approve the enclosed SMMP for BRM.

2. Reference message, HQ TRADOC, ATCD-SP, 251700Z Mar 88, subject: MANPRINT Update Message Number 88-3, System MANPRINT Management Plan Approval Procedures.

3. All questions concerning this SMMP should be addressed to ATSE-CDM-C, ATTN: SFC Barry L. Leatherman, Fort Leonard Wood, MO 65473 or AUTOVON 676-7329 or Commercial (314) 563-7329.

FREDERICK J. CHARLES, III
Colonel, Engineer
Director of Combat Developments

3 Oct 1990
Date

RICHARD H. JOHNSON
Colonel, Ordnance
Project Manager for Mines,
C/Mine and Demolitions

17 Oct 90
Date

SYSTEM MANPRINT MANAGEMENT PLAN (SMMP)

FOR THE

BRIDGE AND ROAD MUNITION (BRM)

DRAFT
September 1990

SFC LEATHERMAN
ATSE-CDM-C
AV 676-7329/7260

US ARMY ENGINEER SCHOOL
(USAES)
ATSE-CDM-C
FORT LEONARD WOOD, MO 65473-6620

SMMP FORMAT
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System MANPRINT Management Plan (SMMP)
for the
Bridge and Road Munition (BRM)

INITIAL DRAFT 26 September 1990

1. Executive Summary

a. The BRM will provide the capability for defeating super highway type roads and modern-day bridges in a rapid and efficient manner. The current M180 Demolition Cratering Charge, which BRM will replace, cannot defeat either of these structures in a rapid and efficient manner.

b. The initial MANPRINT strategy will be based on the predecessor system and technology demonstration in the R&D effort. MANPRINT will be applied throughout the full developmental cycle. Human Factors will be included in system design. Test and Evaluation will fully consider "Man-in-the-loop" factors. The MANPRINT Joint Working Group will insure MANPRINT Issues are addressed and resolved. Because of the nature (demolitions) and importance (destroying modern-day roads and bridges) of this device, it will be essential that a significant MANPRINT effort be done on this device. The SMMP addresses MANPRINT concerns which will assist in identifying system characteristics and design requirements in order to optimize human performance and meet mission needs. It is the management tool to be used throughout the entire acquisition process as more data becomes available.

c. The key MANPRINT issues are:

(1) The ability of the target audience to safely employ, operate and maintain the BRM during all types of battlefield and climatic conditions.

(2) The ability of the soldier to perform operational functions to standard.

(3) The ability of soldiers to carry the BRM safely.

(4) The capability of training resources to meet training requirements without growth in resource demand.

d. Major tasks currently planned are:

(1) Human Factor Engineering Assessment (HFEA).

(2) System Safety Assessment (SSA).

(3) Health Hazard Assessment (HHA)

(4) Cost and Training Effectiveness Analysis (CTEA).

(5) System Training Plan (STRAP).

(6) Conduct a Task Analysis (TA).

(7) Develop a Target Audience Description (TAD).

(8) MANPRINT Assessment (MA).

(9) Manpower, Personnel, and Training (MPT) Assessment.

(10) MANPRINT Review.

e. The lead agency in the development of the BRM MANPRINT Management Plan will be DCD, USAES. The key participants and their responsibilities in the MANPRINT effort for the BRM will be:

Directorate of Combat Development, USAES
-Identify and resolve Manpower/Personnel Issues
-Identify and resolve System Safety Issues

Directorate of Training and Evaluation Development, USAES
-Identify and resolve Training Issues

Human Engineering Laboratory
-Identify and resolve Human Engineering Issues

Proponency Office USAES
-Assist DCD in resolving Manpower/Personnel Issues

Materiel Developer ARDEC
-System safety center

TRADOC Analysis Command
-Assist TED in resolving Training Issues

Office of the Surgeon General
-Identify and resolve Health Hazard Issues

Personnel Integration Command
-Assist in resolving Manpower, Personnel, Training Issues

OTEA
-Validate that the MANPRINT Issues have been resolved

e. The expected Initial Operational Capability (IOC) is scheduled for 1st Qtr, FY 95.

2. Description

a. System. The Army needs a new generation demolition device that will crater super highway type roads and destroy modern day bridges. This device will have multiple mission capabilities. Additional capabilities will consist of making expedient obstacles by destroying airfields and dams.

(1) The BRM will be a demolition device that will be used to defeat super highway type roads and modern day bridges. The BRM will replace the M180 Cratering Charge Device. The M180 cannot crater modern-day highways or destroy most bridges in any operational environment. The M180 also is susceptible to radio frequencies. BRM is conceived as being a 130 pound (when packaged), two-man carry, erector kit, with an integrated, self contained, two-stage munition capable of destroying or severely damaging reinforced concrete bridge abutments, reinforced concrete substructures, and cratering concrete paved autobahn type roads. This device will have the capability to be rapidly emplaced (one-step method of extending the positioning leg), and quickly readied for initiating multiple BRMs connected together in a series. Because of evolving technology alternative design versions compared to the M180 will be acceptable on the condition that the new design addresses all MANPRINT issues of Manpower, Personnel, Training, Human Factors Engineering, System Safety, and Health Hazards.

(2) The BRM should meet the following performance characteristics:

(a) Capable of cratering super highway (autobahn) type roads.

(b) Capable of destroying bridges or reducing the load bearing capability of the bridges by 75%.

(c) Capable of several BRM being connected in a series.

(d) The BRM should be capable of being checked for proper system hookup.

(e) Capable of being carried (unpackaged) by two men over smooth terrain or 4 men over rough terrain.

(f) The BRM should be able to be fired by the currently used detonating/initiating systems.

(g) Capable of being transported by all means.

b. Acquisition Strategy. BRM will be procured under the Army Developmental Acquisition Process (ASAP). A complete developmental effort is needed. The developmental effort being

pursued in the PAM program will be review and the new technology if applicable will be included in the BRM program. Milestone Decision Reviews will be carried out through the IPR process. Until Milestone I, the Engineer School will be the lead agency for both MANPRINT and the Acquisition Process. After Milestone I, the Program Manager will have the lead. Other agencies participating in this acquisition will include agencies listed in c. below.

c. Agencies. The lead agency in the development of the BRM SMMP is the Directorate of Combat Developments, USAES. Key participants and their responsibilities in the MANPRINT effort for BRM are:

TRADOC

Proponent School: U.S. Army Engineer School
-Directorate of Combat Development
-Directorate of Training Development

Integrating Centers
-USALOGC, Logistics Integrating Center
-USACAC, Combat Integrating Center
-USAPIC, Personnel Integration

HQ TRADOC
- DCSCD
- DCST

AMC

HEL
-Human Factors Engineer

ARDEC
-Materiel Developer
-System Safety
-Program Manger

Testing Community
-OTEA, Testing Agency
-TECOM, Army Technical Testing

USAOMMCS
-Logistics Oriented School

Other
USAJFKSWCS
Army Surgeon General, Health Hazard Assessment
DCSPER
DCSOPS
Army Research Institute
Operational Test and Evaluation Agency

d. Guidance.

(1) "A Priori" Decisions. NONE.

(2) General DA and TRADOC Guidance.

(a) The original guidance of HQ TRADOC was to have a Pre-Planned Product Improvement (P3I) put into the O&O Plan. This position was taken because of the belief that to have one demolition device accomplish both missions, destroy autobahn type roads and modern day bridges, was not technologically feasible at that time. The direction headed was to develop at least the road portion and when the technology became available then incorporate (P3I) the Bridge Munition into the Road Munition to have the intended BRM device.

(b) TRADOC's new position is that the O&O Plan should be used to drive the R&D technology base to demonstrate its ability to meet the user's full requirement (take out the P3I from the O&O Plan). If this does not prove to be possible within the time allotted, then the Materiel Developer should state what can be developed for FSD or the effort can be deferred until technology is ready.

(3) ASSUMPTIONS. The following assumptions have been made:

(a) The device will not cause a net increase in manpower requirements.

(b) No change in the target audience quality or quantity.

(c) No new MOSs or ASIs will be required to operate or maintain the device.

(d) The device will not cause an increase in training requirements, to include concurrent training with the predecessor system.

3. MANPRINT Strategy

a. Objectives.

(1) General. The goal of the MANPRINT program is to affect system design early in the development process in order to: identify and eliminate or control health and safety hazards; ensure that human factors are given proper consideration; minimize the impact of system fielding by elimination of any need for a new MOS, additional training requirements, or increased quality levels of operators/maintainers and insure MANPRINT issues are incorporated into requirement and program documents.

(2) Manpower.

(a) Live within current TOE/TDA position authorizations.

(b) Minimize the BRM and BRM training device fielding impact on maintainers, and others.

(3) Personnel.

(a) Stay within current aptitude and skill level requirements.

(b) Avoid the creation of a new MOS or ASI.

(c) Ensure high-driver tasks of predecessor systems are identified and eliminated or simplified.

(4) Training.

(a) Train all critical tasks at TRADOC schools.

(b) Ensure training requirements do not increase.

(c) Sustainment unit training should not be increased.

(d) Ensure training aids/devices are available for testing and support training requirements.

(e) Ensure a System Training Plan (STRAP) is prepared.

(f) Provide MANPRINT information and data for developing technical manuals, field manuals, training manuals and other training media and technical publications.

(g) Ensure publications efforts and other training media do not require aptitudes, education, or training greater than needed to perform the task.

(h) Ensure that all health, safety and human factors are included and correctly referenced in the systems training publication and procedures.

(i) Ensure that a cutaway inert model will be developed for EOD training.

(5) Human Factors Engineering.

(a) BRM will be designed in such a way as to facilitate task completion by the Target Audience, ensuring minimum task difficulty and minimizing the potential for human error. Human performance standards will be included in testing and training documents.

(b) Avoid increasing physical demands from what is presently required by soldiers to accomplish a like demolitions task, in the Target Audience Group.

(c) Ensure that the system can be operated and maintained by the 5th to 95th percentile soldier.

(d) Ensure the system is operable by soldiers while wearing the full range of the individual clothing and equipment including NBC protective clothing (MOPP 4) and Arctic Gear.

(e) BRM shall comply with the appropriate human factors engineering criteria from MIL STD 1472D and design guidance provided by experienced HFE practitioners.

(f) Ensure that the human error rate for critical tasks is less than 10%.

(g) All HFE requirements shall apply to BRM Packaging.

(6) SYSTEM SAFETY.

(a) Ensure potential safety hazards resulting from equipment design and its use in the operational environment are identified and eliminated or controlled.

(b) Consider maintenance and support personnel as well as crew in safety analyses.

(c) Ensure that the system incorporates safety features to protect the user, other personnel in close proximity, and facilities during operation and storage.

(d) Lessons learned from the predecessor systems will be considered in the BRM development.

(e) Reduction or elimination of susceptibility by packaged and unpackaged BRM from RF interference, induced current, and EMP.

(f) Ensuring that the BRM is engineered so that it can be carried in the same vehicles as the initiating /detonating system it will be used with.

(7) HEALTH HAZARDS.

(a) An initial HHA will be requested through HQ TRADOC (ATMD) to HQDA (DASG-PSP).

(b) Eliminate or control all hazards that may adversely have an impact on the health or safety of the soldier or degrade soldier performance. Tradeoff analysis will be conducted when

hazards cannot be designed out within bounds of cost, time and desired operational effectiveness.

(c) Using the predecessor systems, ensure specific health/safety hazards are addressed.

(d) Ensure all health, safety, and Human Factors Engineering criteria are included and correctly referenced in the System's training publications and procedures to control risks.

(8) Other.

(a) Other objectives include avoiding the repeat of any MANPRINT shortcomings that exist with the device. BRM will replace the M180 Demolition Cratering Charge.

(b) Ensuring that mature technology is used in the design of the BRM device.

b. Data Sources/Availability

(1) Predecessor System. The key MANPRINT issues for BRM will be similar to those associated with the predecessor system the M180 Demolition Cratering Charge it will replace.

(2) Early Availability of Data/Risk Analysis.

(a) Manpower, personnel, and training constraints can be identified.

(b) Associated performance issues can be identified.

(c) Lessons learned in the area of system safety, health hazards and human factors on the predecessor will be identified.

(d) The key to the MANPRINT effort will be to schedule necessary analyses, simulations and tests early to generate data that may be required but is not available from the predecessor system.

(e) Include answers to MANPRINT concerns and questions in technology demonstrations.

(f) Greater emphasis will be placed on analyses, simulations and testing to generate data on soldier functions, tasks, and performance with new technologies.

(3) The planned level of MANPRINT analyses effort.

(a) In pre-Milestone I/II, MANPRINT actions include the development of information to support design decisions in the

developmental part of BRM. MANPRINT actions include:

- Develop and staff the BRM SMMP.
- Formulation of the MANPRINT Joint Working Group
- Development and refinement of MANPRINT issues/questions and obtain approval.
- Initiation of research actions required to develop answers to MANPRINT questions.
- Include a MANPRINT goal objective and constraint in the O&O, ROC, and TEMP.
- Develop a System Training Plan.
- Include MANPRINT Issues/Concerns in the ILSP, RFP, and SOW.
- Target Audience to industry.

(b) After Milestone I/II, MANPRINT actions include the development of information and prototypes to support the acquisition decision. These MANPRINT actions include:

- Ensuring MANPRINT analyses listed in Tab C are accomplished.
- Develop a System Safety Assessment.
- Reviewing prototype design to assess adherence to MANPRINT constraints and document results.
- Ensuring all MANPRINT issues have been resolved prior to production.
- Update SMMP as questions are answered.
- Develop a MANPRINT Assessment.
- Crosswalk MANPRINT issues between SMMP, O&O, ROC, TEMP, IEP, and RFP as changes occur.
- MANPRINT testing.
- Review MANPRINT issues in the RFP.

(c) After Milestone III, MANPRINT efforts will focus on:

- Ensure MANPRINT Concerns are answered
- Ensure that a suitable post fielding test validates the MANPRINT goal.
- Develop lessons learned.

4. MANPRINT CONCERNS.

a. MANPOWER

(1) That maintenance manpower of the BRM will be kept to a minimum by not requiring more checks and services than the predecessor system.

(2) That the BRM device may require more than two soldiers to carry the BRM while in the packaged configuration.

b. PERSONNEL

(1) The soldier using the current demolition munition device (the M180 Demolition Cratering Device) may not be capable of performing similar tasks with the BRM.

(2) That the BRM device may require a new MOS or additional skill identifier before being fielded.

c. TRAINING

(1) Once fielded the length of the BRM Program of Instruction (POI) should be the same as the current system being taught if not shortened. New Equipment Training will be developed IAW AR 350-35, Army Modernization Training.

(2) That sustainment training requirements may be increased.

(3) That the new device should not impact on current doctrine and tactics. The BRM device should improve the speed and safety of employment by the using soldier.

(4) The system's inert training devices, training literature and publications should be available prior to soldier/device interface which is as early as initial testing which is prior to IOC.

(5) Identification, simplification and effective training of high driven task, consistent with cost effectiveness.

d. HUMAN FACTORS ENGINEERING

(1) BRM will be designed in such a way as to facilitate task completion by the Target Audience, ensuring minimum task difficulty and minimizing the potential for human error. Human performance standards will be included in testing and training documents.

(2) The system will be manportable in that depending on the weight of the unpackaged device, two soldiers over smooth terrain, or four soldiers should be able to transport the device over rough terrain, without unnecessary strain to the soldiers, to accomplish the demolition mission. The addition of handles to the unpackaged device is conceivable and should be considered.

e. SYSTEM SAFETY

(1) The predecessor system's safety hazards, such as RF susceptibility and complicated system connections when using multiple devices, connected in a series, to detonate simultaneously, should be designed out and eliminated.

(2) New technology design features should be analyzed for potential injury-causing defects.

(3) That hardware-embedded safe separation delay timers should not be used.

(4) That the system may not be tested for safe operation by the target audience under all types of conditions. This includes Hot, Basic, and Cold climates and while operating in a initial nuclear and NBC environment. The BRM should be decontaminable while packaged and be operable in and NBC environment.

(5) The possibility of detonation by ballistic fragments should be minimized for the users protection.

f. HEALTH HAZARD

(1) That health hazard problems from the current system should be eliminated or controlled whether they may be real or potential problems.

(2) That residual hazards or conditions will be reduced or minimized.

(3) That employment of the BRM while wearing cold weather equipment or NBC gear will not cause undue stress on the operator while performing operator tasks.

5. TABS.

a. TAB A. Data Sources

b. TAB B. MANPRINT Milestone Schedule

c. TAB C. Task Descriptions

d. TAB D. Questions to be Resolved

e. TAB E. Coordination

f. TAB F. Audit Trail

g. TAB G. Target Audience Description

TAB A
DATA SOURCES

1. The following are potential data sources on current systems that will be reviewed in each of the following areas; Manpower, Personnel, Training, Human Factors Engineering, System Safety, and Health Hazard:

DATA SOURCE	RATIONALE
O&O Plan	Concept/System Criteria
STRAP	Training Concept
TEMP	Critical MANPRINT Issues
ARTEP	Performance Data
SQT	Performance Data
AR 611-201	Target Audience
DOES	Performance Issues, Training Task
Mishap Data Base	SS Lessons Learned
Safety Expertise in AMC/TRADOC/Contractor	SS Lessons Learned
Contractor Data	HH Lessons Learned

2. Data generated on new technologies and the new system will become primary data as it is developed.

3. Data generated from future events (listed below) will become primary data as it is developed and the data will be included in the appropriate MANPRINT area of the SMMP during the updating of the SMMP.

IEP/IER	Critical MANPRINT Issues
HFEA	Critical HFE, HH, and SS
HHA	HH Lessons Learned
BOIP/QQPRI	Manpower and Personnel Data

TAB B

MANPRINT MILESTONE SCHEDULE

ACTION	SCHEDULED COMPLETION DATE
TAD	FY 90
SMMP	FY 90
O&O PLAN	FY 90
TEMP	FY 91
ILSP	FY 91
STRAP	FY 91
SAR	FY 91
CTEA	FY 91
IAR	FY 91
EUT&E	FY 91
COEA	FY 91
QQPRI/BOIP	FY 91
HHA	FY 91
CTA	FY 91
HFEA	FY 91
COIC	FY 92
ROC	FY 93
IPR MILESTONE I/II, (UPDATE SMMP)	FY 93
NETP	FY 93
IOT&E	FY 93
IPR MILESTONE III, (UPDATE SMMP)	FY 94
FOT&E	FY 94
IOC	FY 95
MILESTONE V, (UPDATE SMMP)	FY 96
SORR	FY 96

TAB C
TASK DESCRIPTIONS

1. Task Description: Develop and update the SMMP.
Rationale: The SMMP is the mechanism used to document, track, and integrate the overall MANPRINT strategy for BRM.
Resources: 40 Mandays.
Time to Complete: The effort is ongoing.
Responsible Agency: MANPRINT Joint Working Group/USAES, DCD.
Support Agencies: USAPIC, ARI, LOGC, CAC, MANPRINT Committee.
Dependencies: None.
Feeds: All MANPRINT activities, the O&O plan, and the ROC.
Answers TAB D Questions: None.

2. Task Description: Human Factor Engineering Assessment.
Rationale: Identify and define soldier limitations.
Resources: 30 Mandays
Time to Complete: 60 Mandays
Responsible Agency: HEL
Support Agency: USAES, ARDEC
Dependencies:
Feeds: ROC
Answers TAB D Questions: a.(1), d.(2), d.(3).

3. Task Description: System Safety Assessment.
Rationale: Identify system safety hazards.
Resources: TBD
Time to Complete: TBD
Responsible Agency: ARDEC, USAES Safety.
Support Agencies: ARDEC.
Dependencies: None.
Feeds: TEMP, HHAR, ROC, Manpower/Personnel Assessment.
Answers TAB D Questions: e.(1), e.(2), e.(3), e.(4), e.(5).

4. Task Description: Health Hazard Assessment
Rationale: Required by AR 40-10
Resources: TBD
Time to Complete: 90 days.
Responsible Agency: Surgeon General
Support Agency: ARDEC
Dependencies:
Feeds: HFEA, TEMP, SAR, AND ROC.
Answers TAB D Questions: f.

5. Task Description: Critical Task Analysis
Rationale: Defines critical task if any.
Resources: 20 Mandays
Time to Complete: 3 Mandays before UT and 3 month after UT.
Responsible Agency: ARDEC
Support Agency: USAES-DOTD.
Dependencies:
Feeds: LSA, STRAP, CFP, BOIP/QQPRI.
Answers TAB D Questions: a.(2), b., c.(6), d.(4), d.(5).

6. Task Description: Systems Training Plan (STRAP).
Rationale: Identify individual and collective training requirements.
Resources: 30 Mandays
Time to Complete: TBD
Responsible Agency: USAES, DOTD.
Support Agency: ARDEC.
Dependencies: CFP, TOD, TOA, BTA.
Feeds: LSA, MFP, QQPRI.
Answers TAB D Questions: c.(4), c.(8).

7. Task Description: Develop a Target Audience Description (TAD)
Rationale: Identify all users and their capabilities.
Resources: TBD
Time to Complete: TBD
Responsible Agency: USAES, DCD & DOTD
Support Agency: USAPIC
Dependencies:
Feeds: O&O, ROC
Answers TAB D Questions: a.(1), a(2), a.(3), c.(1), d(1), d.(2).

8. Task Description: MANPRINT Assessment
Rationale: Identify performance problems.
Resources: TBD
Time to Complete: TBD
Responsible Agency: USAES, DCD & DOTD
Support Agency: USAPIC
Dependencies:
Feeds: O&O, ROC
Answers TAB D Questions: g.(2), g.(3).

9. Task Description: Conduct a Cost Training Effectiveness Analysis.
Rationale: Identify performance problems.
Resources: TBD
Time to Complete: TBD
Responsible Agency: USAES/DOTD
Support Agency: ARDEC, Contractor
Dependencies:
Feeds:
Answers TAB D Questions: g.(1), c.(6).

10. Task Description: Conduct a MPT Assessment.
Rationale: Identify problems in the MPT area.
Resources: TBD
Time to Complete: TBD
Responsible Agency:
Support Agency:
Dependencies:
Feeds:
Answers TAB D Questions: c.(6), c.(7).

11. Task Description: Conduct a MANPRINT Review.
Rationale: Identify all MANPRINT Issues.
Resources: MJWG
Time to Complete: TBD
Responsible Agency: USAES
Support Agency: All MANPRINT agencies.
Dependencies:
Feeds:
Answers TAB D Questions: Reviews all questions.

TAB D

QUESTIONS TO BE RESOLVED

a. Manpower.

(1) Will the weight of BRM be such that more than two soldiers are necessary to carry the system?

(2) Will the emerging technology be the cause for a new MOS and changed MTOEs?

b. Personnel. Will the device development result in the creation of different skill levels accomplishing current skill level like tasks?

c. Training.

(1) Will the BRM require additional training when in institutional training or sustainment training?

(2) Will the training device be capable of accurately simulating the actual system?

(3) Will the manuals be complete, accurate, and easily understood by the Target Audience?

(4) Will the BRM require additional sustainment training for individual, squad, or platoon personnel?

(5) Will unit training, and system support materiel to include training device(s), training literature and publications be developed in time for concurrent testing and fielding?

(6) Are there any high driven tasks that may result in cost overrides? Can these high driven tasks be effectively trained?

(7) Is MANPRINT a consideration in the preparation of training media and technical publication?

(8) Will training package be available for scheduled training?

d. Human Factors.

(1) Can the BRM be operated and maintained by the 5th to 95th percentile soldier?

(2) Does the system have a low human error likelihood of a misfire when put into operation by the operator?

(3) Will the BRM be fitted with handles so that it can be carried by soldiers?

(4) How much time is required to prepare and emplace the BRM.

(5) Can the BRM be installed and operated by a soldier who is environmentally clothed (i.e., NBC, cold weather, etc.)?

e. System Safety.

(1) Will safety hazards be identified and eliminated prior to system production/procurement?

(2) Will the soldier be able to safely arm the device during NBC operations and inclement weather?

(3) Will the BRM have NBC contamination survivability?

(4) Will the BRM eliminate the special connection requirements when connecting multiple BRMs in a series as presently required by the M180 Cratering Charge?

(5) Will the BRM be rendered unusable or hazardous when exposed to a HEMP environment?

f. Health Hazards. Will health hazards be identified and eliminated or controlled during system development?

g. Others.

(1) What technologies are mature enough to incorporate into the fielding of the BRM?

(2) Can milestones be shortened for an earlier fielding date without a negative MANPRINT impact?

(3) Is technology presently available to have a munition that can accomplish both missions and still have a user/device interface for the target audience?

TAB E

COORDINATION

DCD SFC LEATHERMAN	ATSE-CDM-C	FT LEONARD WOOD, MO AV 676-7329
DCD CHARLES MANNING	ATSE-CDM	FT LEONARD WOOD, MO AV 676-7323
DOTD R. DUBOWSKI	ATSE-TDN-E	FT LEONARD WOOD, MO AV 676-7634
ARDEC RICK WAGNER	AMCPM-MCD-D	PICATINNEY ARSENAL AV 880-7838
TRADOC LTC LEADBETTER	ATCD-MW	FT MONROE, VA AV 680-2365/5000
LOGC CHARLIE MOORE	ATCL-MR	FT LEE, VA AV 687-4136
USAIS ARNOLD SMITH	ATSH-CD-MLS-E	FT BENNING, GA AV 835-3181/1910
USAPIC JOE SAWYER	ATNC-NMM-B	ALEXANDRIA, VA AV 221-2080
USAARMS DENNIS LIPSCOMB	ATSB-CDS	FT KNOX, KY AV 464-8132/1909
USAOTEA Maj MALLY	CSTE-CS	ALEXANDRIA, VA AV 289-0476
USAJFKSWCS MSG KUEBLER		FT BRAGG AV 239-1816
USACS TBD	ATZN-CM-CS	FT MCCLELLAN, AL
USAMPS TBD	ATZN-MP-CCC	FT MCCLELLAN, AL
OMMC&S TBD	ATSK-CM	REDSTONE ARSENAL, AL
USAQMS TBD	ATSM-CDM	FT LEE, VA AV 687-
USATALS TBD	ATSP-CDM	FT EUSTIS, VA

USAFAS ROSE ANN CORLEY	ATSF-CML ATSF-TSM-FS-SS	FT SILL, OK DSN 639-2045/6501
USAADAS TBD	ATSA-CDM	FT BLISS, TX AV 978-
USACC&S TBD	ATSC-DCD	FT MONMOUTH, NJ
HQDA LTC BLACKWOOD	DAPC-ZAM	WASHINGTON, DC AV 225-
DCSPER		
ASC TBD	CSSC-SE	FT RUCKER, AL AV 558-
HEL MR GOLDEN	SLCHE-FS-M	ABERDEEN PROVING GROUND, MD AV 298-5830
BRDEC TBD	STREB-TIS	FT BELVOIR, VA AV 354-
HQDA, ODCSPER TBD	DAPE-MBI	WASHINGTON, DC AV 227-
ARDEC JACK CARLOCK	SLCHE-AR	Picatinny, NJ AV 880-3227
USALC TBD	AMSLC-TP-AL	ADELPHI, MD AV 290-
WES MR CARLTON		VICKSBURG, MI (601) 634-3812

TAB F
AUDIT TRAIL

1. O&O Plan was approved by General Schroeder, USAES's Commandant, on 2 May 1990 and sent to HQ TRADOC.

2. A SMMP Joint Working Group Meeting was scheduled for 19 and 20 September 1990. From all invited agency through worldwide staffing of the SMMP no agency had a representative at the MJWG. All comments received on DA FORM 2028 were considered for inclusion to the SMMP. The following listed agencies sent comments by mail or phone:

ACTIVITY	SUBMITTED	ACCEPTED	CONCURRED
USAISC			X
USATSAA			X
USAMPS			X
USAQS			X
USASC			X
USASSC			X
USATS			X
USALEA			X
USAOC&S			X
USAOMMCS	13	13	X
USAAS	11	10	X
USAARDEC	18	17	X
USAFAS	2	1	X
USANCA	1	1	X
USAAHS	3	3	X
USAMSAA	3	3	X
USAPIC	15	15	X

TAB G
TARGET AUDIENCE DESCRIPTION

1. The Target Audience Description (TAD) delineates the number, characteristics, and potential performance of the soldiers who will operate the BRM. The TAD also describes the range of individual qualifications of all related physical, mental, physiological, demographical, and motivational dimensions. A basic assumption of these TADs is that the soldier of FY 00 will have many of the same characteristics as the current soldier.

2. The following CMFs have MOSs that are identified as being appropriate for the BRM: CMF; 11, 12, 19, 51, 62, and CMF 55. Additional MOSs identified in QQPRI will appear in updates of this SMMP.

3. As new information becomes available updates to the TADs will occur. The USA Personnel Integration Command (USAPIC) will be provided updates. The Contractor may extract current information for the TAD from the following sources:

AR 611-201	Enlisted Career Management Fields and Military Occupational Specialties
MIL STD 1472C	Human Engineering Design Criteria For Military Systems, Equipment and Facilities
FC 21-451	I Am The American Soldier

4. High-driver task TBD.

5. Target Audience Description.

6. Related demolition tasks.

7. CMFs with possible related BRM demolition missions/tasks:
Note: The TADs received from worldwide staffing will become enclosures to TAB G.

a. Engineer, CMF 12 and 51.

b. Infantry, CMF 11, as target turnover.

c. Armor and Armored Cavalry, CMF 19, as target turnover.

d. Ordnance and Explosive Ordnance Disposal, CMF 55.

Appendix A

Acronyms

AEHA	Army Environmental Hygiene Agency
AFQT	Armed Forces Qualification Test
AHS	Academy Health Science
AMC	Army Materiel Command
AMCCOM	US Army Armament, Munitions and Chemical Command
AMEDD	Army Medical Department
ARPRINT	Army Program For Individual Training
ARTEP	Army Training and Evaluation Program
ASARC	Army System Acquisition Review Council
ASVAB	Armed Services Vocational Aptitude Battery
ATRRS	Army Training Requirement Resources System
AVSCOM	USA Aviation Systems Command
BOIP	Basis of Issue Plan
CAC	Combined Arms Center
CD	Combat Developer
CECOM	US Army Communications-Electronics Command
CMF	Career Management Field
COEA	Cost and Operational Effectiveness Analysis
COIC	Critical Operational Issues and Criteria
CTEA	Cost and Training Effectiveness Analysis
DA	Department of the Army
DCSOPS	Deputy Chief of Staff, Operations and Plans
DCSPER	Deputy Chief of Staff for Personnel
DOES	Directorate of Evaluation and Standardization
DOTD	Directorate of Training Development
EARA	Equipment Authorizations Review Activity
ECA	Early Comparability Analysis
FSPRD	Force Structure Personnel Requirement Directorate, USAPIC
HARDMAN	Hardware vs. Manpower Comparability Methodology
HFEA	Human Factors Engineering Analysis
HHAR	Health Hazard Assessment Report
IEP	Independent Evaluation Plan
IER	Independent Evaluation Report
LABCOM	US Army Laboratory Command
LCSMM	Life Cycle System Management Model
LOGC	US Army Logistics Center
LSA	Logistic Support Analysis
MANPRINT	Manpower and Personnel Integration
MAP	Materiel Acquisition Process
MEPSCAT	Military Entrance Physical Strength Capacity Test
MICOM	US Army Missile Command

MID	Manning Integration Directorate of USAPIC
MJWG	MANPRINT Joint Working Group
MLRPS	Manpower Long Range Planning System
MOS	Military Occupational Specialty
MPT	Manpower, Personnel, and Training
MEDC	Medical Research and Development Center
MRSA	Materiel Readiness Support Activity
NBC	Nuclear, Biological, and Chemical
NDI	Nondevelopmental Item
NETP	New Equipment Training Plan
O&O Plan	Operational and Organizational Plan
OPM	Office of Personnel Management
OSG	Office of the Surgeon General
OT	Operational Testing
OTEA	Operational Test and Evaluation Agency
PERT	Program Evaluation and Review Technique
PIP	Product Improvement Program
PM	Program/Project/Product Manager
PMAD	Personnel Management Authorization Document
POI	Program of Instruction
PPCC	Personnel Proponency Coordination Center
QQPRI	Qualitative and Quantitative Personnel Information
R&D	Research and Development
RFP	Request for Proposal
SAR	Selected Acquisition Report
SMMP	System MANPRINT Management Plan
SOW	Statement of Work
SQT	Skill Qualification Test
STRAP	System Training Plan
TACOM	US Army Tank-Automotive Command
TAD	Target Audience Description
TD	Training Developer
TEA	Training Effectiveness Analysis
TECOM	US Army Test and Evaluation Command
TEMP	Test and Evaluation Master Plan
TILO	Technical Information Liaison Officer
TOA	Trade-Off Analysis
TOE	Table of Organization and Equipment
TR	Test Report
TRADOC	US Army Training and Doctrine Command
TSM	TRADOC System Manager
TT	Technical Test
USAPIC	US Army Personnel Information Center
USAES	US Army Engineer School

Appendix B

References

AR 40-10	Health Hazards Assessment
AR 70-1	System Acquisition Policy and Procedures
AR 70-10	Test and Evaluation During Development and Acquisition of Materiel
AR 70-15	Product Improvement of Materiel
AR 71-2	Basis of Issue Plans (BOIPs) and Qualitative and Quantitative Personnel Requirements Information (QQPRI)
AR 71-9	Materiel Objectives and Requirements
AR 385-16	System Safety Engineering and Management
AR 602-1	Human Factors Engineering Program
AR 602-2	Manpower and Personnel Integration (MANPRINT)
AR 700-127	Integrated Logistic Support (ILS)
AR 1000-1	Basic Policies for Systems Acquisition
DA Pam 11-25	Life Cycle System Management Model for Army Systems
TRADOC Reg 71-12	Total System Management - TRADOC System Managers
TRADOC Reg 11-7	Operational Concepts and Army Doctrine
AMC/TRADOC PAM 70-2	Materiel Acquisition Handbook
	Early Comparability Analysis Handbook
	HARDMAN Comparability Analysis Methodology Guide

APPENDIX C
TARGET AUDIENCE DESCRIPTION

APPENDIX C

TARGET AUDIENCE DESCRIPTION/BASELINE MOS DESCRIPTION

MOS 12B COMBAT ENGINEER CMF 12

A. CURRENT INVENTORY AND PROJECTED FORCE STRUCTURE.

		CY	INVENTORY	CY+1	CY+2	CY+3
GRADE	SL	AUTH	STRENGTH%	AUTH	AUTH	AUTH
E3	1	4117	115.4	4498	4478	4478
E4	1	3824	95 9	3775	3805	3809
E5	2	2194	97.6	2191	2190	2190
E6	3	1700	101.8	1708	1708	1708

B. STANDARDS OF GRADE AUTHORIZATION.

DUTY	POSITION	CODE	RANK	NOTE
Wheel	Vehicle Driver	12B10	PFC	
Combat	Engineer	12B10	PFC	
Combat	Engineer	12B10	SP4	
Track	Vehicle Driver	12B10	PFC	
Team	Leader	12B20	SGT	
Assistant Squad Leader		12B20	SGT	
Reconnaissance SGT		12B30	SSG	
Squad	Leader	12B30	SSG	
Section Leader		12B30	SSG	
Construction Foreman		12B30	SSG	
Operations Sergeant		12B40	SFC	
Construction Inspector		12B40	SFC	
Platoon Sergeant		12B40	SFC	

C. MOS/CIVILIAN DESIGNATION AND DESCRIPTION.

1. CAREER MANAGEMENT FIELD (CMF): 12 COMBAT ENGINEER

2. OPERATOR MOS: 12B COMBAT ENGINEER

3. ADDITIONAL SKILL IDENTIFIERS: P5 MASTER FITNESS TRAINER
4A RECLASSIFICATION TRAINING

4. SECURITY CLEARANCE: NONE

5. JOB DESCRIPTION: Major duties at the different skill levels are:

a. MOSC 12B10. Assists combat engineers by performing combat construction, combat demolitions, and related duties.

b. MOSC 12B20. Performs as team leader and assistant squad leader in combat construction, demolition, and duties.

c. MOSC 12B30. Serves as squad leader; as section leader; as reconnaissance sergeant; as construction foreman; as advisor to supported units, allied forces, ARNG and USAR; and as instructor.

d. MOSC 12B40. Serves as platoon sergeant; as operations sergeant; as construction inspector; as advisor to supported units, allied forces ARNG and USAR; and as instructor.

6. RELATED CIVILIAN OCCUPATIONS:

a. DOT classification.

(1) Rigger--869.683-014
(2) Dump truck driver--902.683-010
(3) Light truck driver--906.683-022
(4) Blaster--859.261-010
(5) Construction worker--869.687-026
(6) Rafter--455.664-010
(7) Drafter--005.281-010
(8) Tree cutter--454.684-026
(9) Construction inspector--182.267-010

b. Federal civil service classification.

(1) Laboring--WG 3502.
(2) Pier facilities working--WG 6702
(3) Truck driving-- WG 5708
(4) Construction supervision--WG 4702.
(5) Engineering aid--GS 802.
(6) Explosives detonating--WG 5504.

D. DEMOGRAPHIC INFORMATION:

1. CIVILIAN EDUCATION:

CY 87	E1-E-4		E5		E6	
	#	%	#	%	#	%
HSG	9104	96.82	2235	99.43	1749	99.89
NON HSG	299	3.18	13	.57	2	.11

2. NUMBER AND PERCENTAGE OF SOLDIERS WITH ENGLISH AS A SECOND LANGUAGE: NOT AVAILABLE AT THIS TIME

3. GENDER MIX: NO FEMALE SOLDIERS.

E. ANTHROPOMETRIC DATA (5TH TO 95TH PERCENTILE MALE)

1. SHOULDER HEIGHT, STANDING: 133.6 TO 154.2 cm

2. SHOULDER HEIGHT, SITTING : 54.2 TO 65.4 cm

3. SHOULDER HEIGHT, KNEELING: 86.1 TO 95.6 cm

4. FUNCTIONAL ARM REACH: 72.6 TO 90.9 cm

5. OTHER:

F. PHYSICAL QUALIFICATIONS

1. GENERAL PHYSICAL DATA: Frequently lifts 100 pounds and carries 25 feet.

2. PULHES PROFILE: 111121 P - Physical Capacity or Stamina
U - Upper Extremities
L - Lower Extremities
H - Hearing and Ear
E - Eyes
S - Psychiatric

3. MEPSCAT RATING (Physical Demands Rating): Very Heavy.

4. VISION:

a. COLOR: Must possess normal color vision.

b. ACUITY:

5. DEXTERITY: Must possess finger dexterity in both hands.

G. APTITUDE DESCRIPTION OF THE TARGET POPULATION:

1. AFQT MENTAL CATEGORY DISTRIBUTION:

	E1-E4	E5	E6
I	236	68	68
II	2369	541	434
IIIA	2101	461	364
IIIB	3400	777	638
IV	954	385	254

2. QUALITY DISTRIBUTION-USAREC ANNUAL PRODUCTION & GOALS:

	PRODUCTION						GOAL	
	CY-3		CY-2		CY-1	CY	CY+1	
	#	%	#	%	# %	# %	#	%
I-IIIA					54.4	52.0		52.0
IIIB					31.0	38.0		38.0
IV					15.0	10.0		10.0

3. PREREQUISITE APTITUDE AREA SCORE: Combat Operations

a. COMPONENTS OF APTITUDE AREA INCLUDE:

ARITHMETIC REASONING (AR)
Auto and Shop (AS)
Coding Speed (CS)
Mechanical Comprehension (MC)

b. APTITUDE AREA ENTRY LEVEL SCORE: 90

4. APTITUDE AREA SCORE DISTRIBUTION: CO (as of Jan 89)

	E1-E4	E5	E6
80- 84	17/ .17	11/ .46	12/ .76
85- 89	123/ 1.24	158/ 7.11	32/ 2.01
90- 94	1453/ 14.60	252/11.39	141/ 8.87
95- 90	1348/ 13.54	254/11.47	179/11.26
100-104	1398/ 13.54	287/12.96	184/11.58
105-109	1348/ 13.54	297/13.42	221/13.91
110-114	1119/ 11.24	253/11.43	197/12.40
115-119	1224/ 12.04	243/10.97	191/12.02
120-124	904/ 9.08	224/10.13	142/ 8.94
125-129	600/ 6.03	117/ 5.31	135/ 8.50
130 >	407/ 4.09	109/ 4.93	135/ 8.50

5. TARGET READING GRADE LEVEL:

	RGL	
	#	%
SL-1 -10.1	2339	28.81
SL-2 -10.4	703	31.84
SL-3 -10.7	536	30.39
S1-4 -11.0	278	30.12

TOTAL ALL SKILL LEVEL - 10.3

TARGET AUDIENCE DESCRIPTION/BASELINE MOS DESCRIPTION

MOS 12F COMBAT ENGINEER CMF 12

A. CURRENT INVENTORY AND PROJECTED FORCE STRUCTURE (Current data source DAPC45 dtd Dec 89, projected data source PMAD dtd Feb 90).

GRADE	SL	CY AUTH	INVENTORY STRENGTH%	CY+1 AUTH	CY+2 AUTH	CY+3 AUTH
E3	1	99	354.5	99	99	101
E4	1	448	43.5	492	503	526
E5	2	480	69.0	579	592	617
E6	3	227	97.0	232	232	244

B. STANDARDS OF GRADE AUTHORIZATION (DATA SOURCE AR 611-201).

DUTY POSITION	CODE	RANK	NOTES
CEV Loader	12F10	PFC	
CEV Driver	12F10	SP4	
AVLB Operator	12F10	SP4	
ACE Operator	12F10	SP4	In engineer (CORPS). This standard will be applied to cumulative ACE operator positions at company level (i.e. to the total number of ACE positions in the company)
ACE Operator	12F20	SGT	
ACE Operator	12F10	SP4	In units other than those described in the notes above.
ACE Operator	12F20	SGT	
CEV Gunner	12F20	SGT	
AVLB Commander	12F20	SGT	
CEV Commander	12F30	SSG	
Section Sergeant	12F30	SSG	In AVLB section.
Platoon Sergeant	12F30	PSG	
Section Sergeant	12F40	SFC	In mobility/counter mobility/countermobility section.
Team Sergeant			In mobility/counter mobility section of engineer battalion for supervision of team comprised of 4 or more CEVs.

C. MOS/CIVILIAN DESIGNATION AND DESCRIPTION:

1. CAREER MANAGEMENT FIELD (CMF): 12 COMBAT ENGINEER

2. OPERATOR MOS: 12F TRACK VEH CREWMEN

3. ADDITIONAL SKILL IDENTIFIER: P5 MASTER FITNESS TRAINER

4. SECURITY CLEARANCE: NONE

5. JOB DESCRIPTION: Major duties at the different skill levels are:

a. MOSC 12F10. Operates or serves as loader on a CEV, or operates an AVLB or and ACE while participating in combat mobility, countermobility and survivability operations.

b. MOSC 12F20. Fires CEV demolition gun and commands AVLB crew.

c. MOSC 12F30. Supervises CEV crew and AVLB section.

d. MOSC 12F40. Supervises AVLB platoon and mobility/ coutermobility section or team.

6. RELATED CIVILIAN OCCUPATIONS:

a. DOT classification.

(1) Bulldozer operator - 850.683-010.

(2) Blaster - 859.261-010.

b. Federal civil service classification.

(1) Tank driving - WG 5707

(2) Tractor operating - WG 5719.

D. DEMOGRAPHIC INFORMATION BY NUMBER AND PERCENTAGE:

1. CIVILIAN EDUCATION:

CY90	E1-E4		E5		E6	
	#	%	#	%	#	%
HSG	606	96.81	343	98.000	224	100
NON HSG	20	3.19	7	2.000		0

2. NUMBER AND PERCENTAGE OF SOLDIERS WITH ENGLISH AS A LANGUAGE:

a. HISPANIC

b. PUERTO RICAN

c. FILIPINO

d. MEXICAN

3. GENDER MIX: No female soldiers.

E. ANTHROPOMETRIC DATA (5TH TO 95TH PERCENTILE MALE):

1. SHOULDER HEIGHT, STANDING: 133.6 TO 154.2 CM

2. SHOULDER HEIGHT, SITTING: 54.2 TO 65.4 CM

3. SHOULDER HEIGHT, KNEELING: 86.1 TO 95.6 CM

4. FUNCTIONAL ARM REACH: 72.6 TO 90.9 CM

5. OTHER:

F. PHYSICAL QUALIFICATIONS:

1. GENERAL PHYSICAL DATA: Frequently lifts and lowers 100 pounds.

2. PULHES PROFILE: 111121 P - Physical Capacity or Stamina
U - Upper Extremities
L - Lower Extremities
H - Hearing and Ear
E - Eyes
S - Psychiatric

3. MEPSCAT RATING (Physical Demands Rating): Very Heavy.

4. VISION:

A. COLOR: Must possess normal color vision.

B. ACUITY: Must pass depth acuity (Verhoeff Stereoper) test.

C. DEXTERITY: Must possess finger dexterity in both hands.

G. APTITUDE DESCRIPTION OF THE TARGET POPULATION:

1. AFQT MENTAL CATEGORY DISTRIBUTION TOTAL FORCE GRADE E-1 THRU E-7 BY NUMBER AND PERCENTAGE:

CY87

	E1-E-4		E-5		E-6	
I	15	2.47	2	.57	3	1.35
II	114	19.20	54	15.51	39	17.64
IIIA	133	22.28	67	19.25	49	22.17
IIIB	248	41.66	137	39.36	87	39.36
IV	85	14.34	88	25.28	43	19.45

AFQT MEAN SCORE

2. QUALITY DISTRIBUTION - USAREC ANNUAL PRODUCTION & GOALS BY NUMBER AND PERCENTAGE:

	PRODUCTION								GOAL	
	CY-3		CY-2		CY-1		CY		CY+1	
	#	%	#	%	#	%	#	%	#	%
IIIA				53.9		58.0		54.0		51.0
IIIB				43.1		33.0		31.0		34.0
IV				3.0		8.9		15.0		15.0

3. PREREQUISITE APTITUDE AREA SCORE: Combat Operations

a. COMPONENTS OF APTITUDE AREA INCLUDE:
Arithmetic Reasoning (AR)
Auto and Shop (AS)
Coding Speed (CS)
Mechanical Comprehension (MC)

b. APTITUDE AREA ENTRY LEVEL SCORE:

4. APTITUDE AREA SCORE DISTRIBUTION BY NUMBER AND PERCENTAGE:

CO

	E1-E4		E5		E6	
	#	%	#	%	#	%
80-84	10	1.46	27	7.41	51	21.88
84-89	76	11.16	25	6.86	13	5.57
90-94	104	15.27	48	13.18	25	10.72
95-99	90	13.21	49	13.46	24	10.30
100-104	93	13.65	49	13.46	16	6.86
105-109	87	12.77	50	13.73	31	13.30
110-114	48	7.04	30	8.24	16	6.86
115-119	56	8.22	34	9.34	25	10.72
120-124	45	6.60	34	9.34	11	4.72
125-129	35	5.13	8	2.19	8	3.43
130 >	25	3.67	10	2.74	13	5.57

5. TARGET READING GRADE LEVEL BY NUMBER AND PERCENTAGE:
(AS OF END OF FY87)

		RGL	
		#	%
SL-1	9.5	533	45.55
SL-2	9.5	329	28.11
SL-3	10.3	233	19.91
SL-4	11.0	75	6.41

TOTAL ALL SKILLS-9.6

MOS 12B,GS2-5 DP #704

COMBAT ENGINEER

CRITICAL TASK LIST INTRODUCTION

1. This critical task list is organized into the following three sections:

a. *Section I - Tasks pertain to common soldier duties.*

The following duty areas (DA) apply to subject duty position:

DA CODE	DA TITLE
XA	Perform first aid duties
XB	Perform nuclear, biological, and chemical (NBC) duties
XC	Perform weapons maintenance duties
XD	Perform security and intelligence duties
XE	Perform land navigation duties
XF	Send a Radio Message
XG	Perform camouflage and concealment duties
XK	Apply customs and laws of war

b. Section II - Lists by general subject areas, the critical tasks to be trained in MOS 12B the recommended training references; the type of training required (resident, integration, or sustainment); and a crosswalk to an ARTEP task, as appropriate.

c. This critical task list is not a self-supportive document. Each generic task is supported by an audit trail as required by TRADOC reg 350-7. The audit trail includes a cross match between item-specific critical tasks and generic tasks. In addition, the generic task analysis will include all critical performance measures and knowledge and skills associated with the item-specific tasks.

2. Table of Contents:

MOS 12B, SL 1/2, DP #704

CRITICAL TASK LIST

SECTION I

DA/CODE/TASK NO.	TASK STATEMENT
XA	
081-831-1000	Evaluate a Casualty
081-831-1003	Clear an Object from the Throat of a Conscious Victim
081-831-1005	Prevent Shock
081-831-1007	Give First Aid for Burns
081-831-1008	Recognize and Give First Aid For Heat Injuries
081-831-1009	Give First Aid for Frostbite
081-831-1016	Put on a Field or Pressure Dressing
081-831-1017	Put on a Tourniquet
081-831-1025	Apply a Dressing to an Open Abdominal Wound
081-831-1026	Apply a Dressing to an Open Chest Wound
081-831-1030	Administer Nerve Agent Antidote to Self (Self-Aid)
081-831-1031	Administer First Aid to Nerve Agent Casualty (Buddy-Aid)
081-831-1033	Apply a Dressing to an Open Head Wound
081-831-1034	Splint a Suspected Fracture
081-831-1040	Transport a Casualty Using a One-Man Carry
081-831-1041	Transport a Casualty Using a Two-man Carry or Improvised Litter
081-831-1042	Perform Mouth-to-Mouth Resuscitation
XB	
031-503-1001	Maintain Your M17-Series Protective Mask with Hood
031-503-1002	Put on, Wear, and Remove Your M17-Series Protective Mask with Hood
031-503-1003	Store Your M17-Series Protective Mask with Hood in Carrier
031-503-1007	Decontaminate Your Skin and Personnel Equipment
031-503-1009	Drink, Use the Latrine, and Check Soldier Sleeping in MOPP 4
031-503-1010	Replace Filters in Your M17-Series Protective Mask
031-503-1011	Maintain Your M24, M25, or M25A1 Protective Mask with Hood

031-503-1012	Put on, Wear, Remove, and Store Your M24, M25, or M25A1 Protective Mask with Hood
031-503-1014	Use M8 Detector Paper to Identify Chemical Agent
031-503-1015	Put on and Wear MOPP Gear
031-503-1018	React to Nuclear Hazard
031-503-1019	Recognize and React to Chemical or Biological Hazard
031-503-1020	Use M9 Detector Paper to Detect Chemical Agent
031-503-1021	Mark NBC Contaminated Area
031-503-1022	Decontaminate Equipment Using M13 Decontamination Apparatus Portable (DAP)
031-503-1023	Exchange MOPP Gear
031-503-2002	Decontaminate Equipment Using ABC M11 Decontaminating Apparatus
XC	
071-311-2001	Perform Operator Maintenance on a M16A1 Rifle, Magazine, and Ammunition
071-311-2003	Load,Reduce a Stoppage, and Clear a M16A1 Rifle
071-311-2004	Battle sight Zero a M16A1 Rifle
071-311-2101	Perform Operator Maintenance on a M203 Grenade Launcher and Ammunition
071-311-2102	Load, Unload, and Clear a M203 Grenade Launcher
071-311-2104	Engage Targets with a M203 Grenade Launcher and Apply Immediate Action to reduce a Stoppage
071-312-3001	Load, Reduce a Stoppage, and Clear a M60 Machine Gun
071-312-3002	Fire a M60 Machine Gun
071-312-3005	Perform Operator Maintenance on a M60 Machine Gun and Ammunition
071-312-3007	Prepare a Range Card for a M60 Machine Gun
071-318-2201	Prepare a M72A2 Law for Firing: Restore a Law to Carrying Configuration
071-318-2202	Engage Targets with a M72A2 Law
071-318-2203	Apply Immediate Action to Correct a Malfunction on a M72A2 Law
071-318-4401	Perform Safety Checks on Hand Grenades
071-325-4402	Engage Enemy Targets with Hand Grenades
071-325-4405	Identify Employ Hand Grenades

MOS 12B, SL 1/2, DP #704

071-325-4412	Install and Fire/Recover a M18A1 Claymore Mine
071-325-0502	Move Under Direct Fire
071-326-0503	Move Over, Through, or Around Obstacles (Except Mine fields)
071-326-0510	React to Indirect Fire
071-326-0511	React to Flares
071-326-0513	Select Temporary Fighting Positions
071-326-5703	Construct Individual Fighting positions
071-331-0852	Clear Fields of Fire
441-091-1101	Perform Search and Scan Procedures
441-091-1102	Engage Hostile Aircraft with Small Arms
XD	
071-326-0512	Estimate Range
071-331-0801	Use Challenge and Password
071-331-0803	Collect/Report Information-SALUTE
071-331-0804	Conduct Day and Night Surveillance without the Aid of Electronic Devices
071-331-0815	Practice Noise, Light, and Litter Discipline
878-920-1001	Recognize Friendly and Threat Armored Vehicles
XE	
071-329-1001	Identify Terrain Features on a Map
071-329-1002	Determine the Grid Coordinates of a Point on a Military Map Using the Military Grid Reference System
071-329-1003	Determine a Magnetic Azimuth Using a Compass
071-329-1005	Determine a Location on the Ground by Terrain association
071-329-1006	Navigate from One Point on the Ground to Another Point, Dismounted
071-329-1008	Measure Distance on a Map
071-329-1012	Orient a Map to the Ground by Map-Terrain association
071-329-1018	Determine Direction Using Field-Expedient Methods
XF	
113-571-1016	Send a Radio Message
XG	
051-191-1361	Camouflage Yourself and Your Individual Equipment
051-191-1362	Camouflage Equipment

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051-192-1022	Locate Mines by Probing
051-202-1363	Camouflage Your Defensive Position
XK	
181-906-1505	Conduct Combat Operations According to the Law of War

TOTAL NUMBER OF TASKS, SECTION I - 80

MOS 12B, SL 1/2, DP #704

CRITICAL TASK LIST

SECTION II

TASK NUMBER	TASK STATEMENT
051-192-1001	Install/remove the M14 antipersonnel mine
051-192-1002	Install/remove the M16A1 antipersonnel mine
051-192-1006	Install/remove the M15 antitank mine
051-192-1007	Install/remove the M19 antitank mine
051-192-1008	Install/remove the M21 antitank mine
051-192-1014	Install/remove US antihandling devices on antitank mines
051-192-1021	Locate mines by visual means
051-192-1023	Locate mines using the AN/PSS11 mine detector
051-192-1040	Locate mines using nonmetallic mine detectors (AN/PRS-7or AN/PRS-8)
051-192-1045	Recognize and distinguish friendly and Threat mines and firing devices
051-193-1001	Use and maintain demolition equipment
051-193-1002	Construct a nonelectric initiating/detonating assembly
051-193-1003	Prime explosives nonelectrically
051-193-1004	Construct an electric initiating/detonating assembly
051-193-1005	Prime explosives electrically
051-193-1007	Prime explosives with detonating cord
051-193-1011	Install dual firing systems
051-193-1013	Neutralize booby traps
051-193-1025	Neutralize mines
051-195-1004	Install pickets, make barbed wire ties, and install concertina
051-201-1004	Use/maintain engineer tools
051-201-2005	Operate generator set, 3 KW, MEP-016A
051-198-1007	Assist in the assembly of a 4-float class 60 bridge/raft
051-198-1008	Assist in the operation of a pneumatic assault boat
051-198-1009	Assist in the assembly of an M4T6 saddle assembly
051-198-1010	Assist in the assembly of a light tactical raft (LTR)
051-198-1011	Assist in the installation of overhead anchorage system components
551-721-1306	Perform operator/crew preventive maintenance check/services

051-197-1003	Assist in the assembly of an M4T6 fixed span
051-197-1004	Assist in the assembly of a double-single Bailey bridge
051-200-1001	Tie knots and lashing
051-200-1002	Prepare a simple tackle system
051-200-1010	Use and maintain rigging equipment
071-333-6001	Drive a wheeled vehicle cross-country
071-333-6004	Operate blackout control and drive a wheeled vehicle using blackout drive
071-333-6004	Start a wheeled vehicle engine using auxiliary power
091-501-1605	Recover a wheeled vehicle
071-333-6500	Drive a tracked vehicle (M113A1 or M901)
071-333-6503	Operate light control and M19 infrared periscope on a tracked vehicle
071-333-6504	Operate a tracked vehicle in water
071-333-6505	Start a tracked vehicle engine using auxiliary power
091-501-1010	Recover a tracked vehicle using field expedients
071-333-6512	Negotiate obstacles in a tracked vehicle

TOTAL NUMBER OF TASKS, SECTION II - 42

MOS 12B, SL 1/2, DP # 704
CRITICAL TASK LIST

SECTION II

TASK NUMBER	TASK STATEMENT
051-192-2009	Install/remove the M1 one gallon chemical mine with electric detonating assembly
051-192-2026	Direct a minefield marking party
051-193-2026	Clear misfires
061-283-6003	Call for/adjust indirect fire
071-326-5605	Control fire team movement
071-326-5606	Select fire team/scout squad overwatch position
051-195-2010 in	Direct construction of fighting position urban terrain
051-195-2000	Direct construction of field fighting and protective
051-199-3004	Direct construction of expedient drainage structures
051-196-2001	Determine limiting slopes
051-196-2002	Determine limiting curves
051-196-2003	Determine stream (GAP) width
051-196-2004	Determine stream velocity
051-198-2007	Classify vehicles using expedient methods
051-192-3029	Direct a minefield laying party
051-192-3031	Direct a minefield recording party
051-192-3032	Direct installation/removal of a hasty protective minefield
051-192-3034	Direct a minefield reconnaissance patrol
051-192-3050	Direct a mine sweeping team
051-192-4056	Conduct a hasty breach of a minefield
051-193-3040	Employ bridge demolitions
051-193-3050	Calculate and designate placement of timber-cutting charges
051-193-3051	Calculate and designate placement of steel-cutting charges
051-193-3052	Calculate and designate placement of breaching charges
051-193-3053	Calculate explosives and designate placement of cratering
051-193-3054	Prepare a demolition reconnaissance report
051-193-3055	Prepare/compile nonnuclear demolition target folders
071-326-5505	Prepare and issue an oral squad operation order
051-194-3500	Conduct a patrol

051-195-3003	Direct construction of wire entanglements
051-195-3005	Direct construction of nonexplosive antivehicular obstacles
051-195-4007	Determine logistical requirement for wire entanglements
051-195-3013	Direct construction of hasty helicopter landing areas
051-196-3009	Prepare a route reconnaissance overlay
051-196-3030	Prepare a road reconnaissance report
051-196-3031	Prepare a tunnel reconnaissance report
051-196-3032	Prepare a ford reconnaissance report
051-196-3033	Prepare a bridge reconnaissance report
051-196-3035	Prepare an engineer reconnaissance report
051-196-3036	Determine the military load classification (MLC) of stringer bridges using the hasty bridge classification wheel
051-197-3004	Direct the assembly of trestle components
051-197-3005	Direct the assembly of an M4T6 fixed span bridge up to 45 feet
051-197-3006	Organize the duties of the Bailey bridge assembly crews
051-197-3007	Perform site layout of a double-single Bailey bridge
051-197-3010	Direct the assembly of bays for a double-double Bailey bridge
051-197-3020	Direct the assembly of a double-single Bailey bridge
051-198-2009	Direct crews in the assembly of a Class 60 raft/bridge
051-198-2010	Direct crews in the assembly of an M4T6 raft/bridge
051-198-2011	Direct crews in the assembly of a light tactical raft (LTR)
051-198-3010	Prepare site layout for M4T6 float bridge/raft
051-198-3014	Direct the assembly of bays of an M4T6 five-float reinforced raft with a 23, 4-inch overhang
051-198-3018	Supervise installation of an overhead cable anchorage system
051-200-3004	Design a tackle system
051-200-3005	Direct construction of expedient lifting devices(A-frame, gin pole, boom derrick, shears, and tripod)

MOS 12B,SL 1/2/3/4, DP #

CRITICAL TASK LIST

SECTION II

TASK NUMBER	TASK STATEMENT
051-192-4041	Determine standard pattern minefield logistical requirements
051-192-4051	Supervise the installation/removal of standard pattern minefields
051-192-4052	Supervise minefield clearing operations
051-192-4053	Supervise minefield breaching operations
051-192-4040	Supervise engineer demolition missions
071-326-5626	Prepare and issue an oral operation order (OPOARD)
051-195-4008	Determine logistical requirement for fighting and protective positions
051-195-4009	Determine logistical requirements for nonexplosive antivehicular obstacles
051-195-4050	Prepare engineer estimates
051-195-4051	Supervise preparation of fighting and protective positions in urban terrain
051-199-4500	Design expedient drainage structures
051-196-4012	Conduct platoon reconnaissance missions
051-196-4013	Determine the military load classification of a timber trestle bridge
051-196-4014	Determine the military load classification of a concrete T-beam bridge
051-196-4015	Determine the military load classification of a concrete slab bridge
051-196-4016	Determine the military load classification of a masonry arch bridge
051-197-4028	Determine Bailey bridge requirements
051-197-4029	Supervise construction of a Bailey bridge
051-197-4030	Supervise construction of a timber trestle bridge
051-198-3008	Direct the assembly of the class 60 bridge/raft
051-198-4054	Determine the requirements for the construction of an M4T6 bridge/raft
051-198-4055	Determine float bridge anchorage system requirements

TOTAL NUMBER OF TASKS, SECTION II - 121

MOS 12F,SL 1

COMBAT ENGINEER VEHICLE CREWMAN

CRITICAL TASK LIST INTRODUCTION

1. This critical task list is organized into the following three sections:

a. Section I - Tasks pertain to common soldier duties.

The following duty areas (DA) apply to subject duty position:

DA CODE	DA TITLE
XA	Perform first aid duties
XB	Perform nuclear, biological, and chemical (NBC) duties
XC	Perform weapons maintenance duties
XD	Perform security and intelligence duties
XE	Perform land navigation duties
XF	Send a Radio Message
XG	Perform camouflage and concealment duties
XK	Apply customs and laws of war

b. Section II - Lists, by general subject areas, the critical tasks to be trained in MOS 12F, the recommended training materials to use, the initial training location (resident or unit), a suggested frequency of sustainment training, and a cross-walk to an ARTEP task. An asterisk (*) next to certain training locations indicates that although the task is trained in residence it is not trained to STP standards there.

c. This critical task list is not a self-supportive document. Each generic task is supported by an audit trail as required by TRADOC reg 350-7. The audit trail includes a cross match between item-specific critical tasks and generic tasks. In addition, the generic task analysis will include all critical performance measures and knowledge and skills associated with the item-specific tasks.

2. Table of Contents:

MOS 12F, SL 1/2, DP #704

CRITICAL TASK LIST
SECTION I

DA/CODE/TASK NO.	TASK STATEMENT
XA	
081-831-1000	Evaluate a Casualty
081-831-1003	Clear an Object from the Throat of a Conscious Victim
081-831-1005	Prevent Shock
081-831-1007	Give First Aid for Burns
081-831-1008	Recognize and Give First Aid For Heat Injuries
081-831-1009	Give First Aid for Frostbite
081-831-1016	Put on a Field or Pressure Dressing
081-831-1017	Put on a Tourniquet
081-831-1025	Apply a Dressing to an Open Abdominal Wound
081-831-1026	Apply a Dressing to an Open Chest Wound
081-831-1030	Administer Nerve Agent Antidote to Self (Self-Aid)
081-831-1031	Administer First Aid to Nerve Agent Casualty (Buddy-Aid)
081-831-1033	Apply a Dressing to an Open Head Wound
081-831-1034	Splint a Suspected Fracture
081-831-1040	Transport a Casualty Using a One-Man Carry
081-831-1041	Transport a Casualty Using a Two-man Carry or Improvised Litter
081-831-1042	Perform Mouth-to-Mouth Resuscitation
XB	
031-503-1001	Maintain Your M17-Series Protective Mask with Hood
031-503-1002	Put on, Wear, and Remove Your M17-Series Protective Mask with Hood
031-503-1003	Store Your M17-Series Protective Mask with Hood in Carrier
031-503-1007	Decontaminate Your Skin and Personnel Equipment
031-503-1009	Drink, Use the Latrine, and Check Soldier Sleeping in MOPP 4
031-503-1010	Replace Filters in Your M17-Series Protective Mask
031-503-1011	Maintain Your M24, M25, or M25A1 Protective Mask with Hood
031-503-1012	Put on, Wear, Remove, and Store Your M24, M25, or M25A1 Protective Mask with Hood

MOS 12F, SL 1/2/3/4, DP #

031-503-1014	Use M8 Detector Paper to Identify Chemical Agent
031-503-1015	Put on and Wear MOPP Gear
031-503-1018	React to Nuclear Hazard
031-503-1019	Recognize and React to Chemical or Biological Hazard
031-503-1020	Use M9 Detector Paper to Detect Chemical Agent
031-503-1021	Mark NBC Contaminated Area
031-503-1022	Decontaminate Equipment Using M13 Decontamination Apparatus Portable (DAP)
031-503-1023	Exchange MOPP Gear
031-503-2002	Decontaminate Equipment Using ABC M11 Decontaminating Apparatus
XC	
071-311-2001	Perform Operator Maintenance on a M16A1 Rifle, Magazine, and Ammunition
071-311-2003	Load, Reduce a Stoppage, and Clear a M16A1 Rifle
071-311-2004	Battle sight Zero a M16A1 Rifle
071-311-2101	Perform Operator Maintenance on a M203 Grenade Launcher and Ammunition
071-311-2102	Load, Unload, and Clear a M203 Grenade Launcher
071-311-2104	Engage Targets with a M203 Grenade Launcher and Apply Immediate Action to reduce a Stoppage
071-312-3001	Load, Reduce a Stoppage, and Clear a M60 Machine Gun
071-312-3002	Fire a M60 Machine Gun
071-312-3005	Perform Operator Maintenance on a M60 Machine Gun and Ammunition
071-312-3007	Prepare a Range Card for a M60 Machine Gun
071-318-2201	Prepare a M72A2 Law for Firing: Restore a Law to Carrying Configuration
071-318-2202	Engage Targets with a M72A2 Law
071-318-2203	Apply Immediate Action to Correct a Malfunction on a M72A2 Law
071-318-4401	Perform Safety Checks on Hand Grenades
071-325-4402	Engage Enemy Targets with Hand Grenades
071-325-4405	Identify Employ Hand Grenades
071-325-4412	Install and Fire/Recover a M18A1 Claymore Mine
071-325-0502	Move Under Direct Fire
071-326-0503	Move Over, Through, or Around Obstacles (Except Mine fields)
071-326-0510	React to Indirect Fire

071-326-0511	React to Flares
071-326-0513	Select Temporary Fighting Positions
071-326-5703	Construct Individual Fighting Positions
071-331-0852	Clear Fields of Fire
441-091-1101	Perform Search and Scan Procedures
441-091-1102	Engage Hostile Aircraft with Small Arms
XD	
071-326-0512	Estimate Range
071-331-0801	Use Challenge and Password
071-331-0803	Collect/Report Information-SALUTE
071-331-0804	Conduct Day and Night Surveillance without the Aid of Electronic Devices
071-331-0815	Practice Noise, Light, and Litter Discipline
878-920-1001	Recognize Friendly and Threat Armored Vehicles
XE	
071-329-1001	Identify Terrain Features on a Map
071-329-1002	Determine the Grid Coordinates of a Point on a Military Map Using the Military Grid Reference System
071-329-1003	Determine a Magnetic Azimuth Using a Compass
071-329-1005	Determine a Location on the Ground by Terrain association
071-329-1006	Navigate from One Point on the Ground to Another Point, Dismounted
071-329-1008	Measure Distance on a Map
071-329-1012	Orient a Map to the Ground by Map-Terrain association
071-329-1018	Determine Direction Using Field-Expedient Methods
XF	
113-571-1016	Send a Radio Message
XG	
051-191-1361	Camouflage Yourself and Your Individual Equipment
051-191-1362	Camouflage Equipment
051-192-1022	Locate Mines by Probing
051-202-1363	Camouflage Your Defensive Position
XK	
181-906-1505	Conduct Combat Operations According to the Law of War

TOTAL NUMBER OF TASKS, SECTION I - 80

MOS 12F, SL 1/2/3/4, DP #

CRITICAL TASK LIST

SECTION II

TASK NUMBER	TASK STATEMENT
071-326-0608	Communicate Using Visual Signalling Techniques
113-587-3072	Perform Operator's Preventive Maintain system Checks and Services (PMCS) on Radio Set AN/VRC-64 or AN/GRC-160 AN/VRC-53 or AN/GRC-125
051-225-3019	Operator a Hot-Loop Wire Communication System
113-622-2010	Place into Operation Inter communication Set AN/VIC-1
031-510-0003	Prepare for a Nuclear Attack CEV Loader
031-510-0004	Prepare for a Nuclear Attack CEV Driver
031-510-0001	Prepare for a Nuclear Attack AVLB Operator
051-225-1000	Perform Before Operations PMCS on a CEV
051-225-1001	Perform During Operation PMCS on a CEV
051-225-1002	Perform After Operation PMCS on a CEV
051-225-1003	Perform Weekly PMCS on a CEV
051-225-1004	Perform Monthly PMCS on a CEV
051-225-1005	Perform Quarterly PMCS on a CEV
051-225-1006	Troubleshoot a CEV
051-225-1007	Repair Track Components on a CEV/AVLB
051-225-0212	Slave Start a CEV/AVLB
051-226-0202	Hydraulically Slave an AVLB
051-226-1000	Perform Before Operation PMCS on an AVLB Launcher
051-226-1001	Perform During Operation PMCS on an AVLB
051-226-1002	Perform After Operation PMCS on an AVLM
051-226-1003	Perform Weekly PMCS on an AVLB Launcher
051-226-1004	Perform Monthly PMCS on an AVLB Launcher
051-226-1005	Troubleshoot an AVLB Launcher
051-226-1012	Perform PMCS on the AVLB Bridge
171-123-1023	Maintain Operator's Part of Equipment Record Folder
051-225-0308	Raise the CEV Moldboard using the Emergency Lift Cables
051-225-1011	Prepare and Operate the Moldboard of a CEV
051-225-1012	Operate the AN/VVS-2 Night Vision Viewer on the CEV/AVLB
051-225-1013	Operate the M24 IR Periscope on a CEV/AVLB
051-225-1030	Drive the CEV/AVLB
051-226-1008	Self Recover an AVLB
051-226-1010	Bridge a Gap Using the AVLB
051-226-1011	Screen Vehicle Movement from Enemy Observation Using the Engine Smoke Generator

051-226-1013	Retrieve the AVLB Bridge Operator
171-123-1049	Start/Stop the Engine on an M48A5/M60-Series Tank/CEV
171-123-1051	Extinguish a Fire on an M48A5/M60-Series Tank/CEV
171-123-1052	Self-Recover an M48A5/M60-Series Tank/CEV
051-225-1019	Respond to a Fire Command Driver
051-225-1020	Prepare the CEV for Firing Loader
051-225-1022	Perform During Firing PMCS on the Main Gun
051-225-1023	Perform After Firing PMCS on the Main Gun
051-225-1024	Apply Immediate Action on the Main Gun Loader
171-122-1005	Clear an M240 Machine Gun to Prevent Accidental Discharge
171-122-1012	Perform Operator Maintenance on an M240/M240C Machine Gun
171-122-1018	Perform Operator Maintenance on a Caliber .50 M85 Machine Gun
171-122-1023	Clear a Caliber .50 M85 Machine Gun to prevent Accidental Discharge
171-122-1023	Apply Immediate Action on an M240 Machine Gun
171-122-1038	Clear an M73/M219 Machine Gun to Prevent Accidental Discharge
171-122-1039	Perform operator Maintenance on an M73/M219 Machine Gun
171-122-1045	Load an M240 Machine Gun
171-122-1049	Load an M73/M219 Machine Gun on an M551/M551A1 ARAAV (Sheridan); M48A5/M60-Series Tank (Less M60A3) CEV
171-122-1050	Apply Immediate Action on an M73/M219 Machine Gun on an M551/M551A1 ARAAV (Sheridan); M48A5/M60-Series Tank (Less M60A3) CEV
171-123-1078	Load/Unload an M239 Grenade Launcher on an M48A5/M60 Series Tank/CEV
171-122-1001	Engage Targets with an M3/M3A1 Submachine
171-122-1002	Clear M3/M3A1 Submachine Gun
171-122-1003	Perform Operator Maintenance on M3/M3A1 Submachine Gun
051-225-1010	Stow UKL8A1RP Smoke Grenades on a CEV/AVLB
051-225-1017	Stow 165mm Ammunition on a CEV
051-225-1018	Stow .50-Caliber Ammunition on a CEV
051-225-1025	Stow 7.62mm Ammunition on a CEV
051-225-1026	Stow .45-Caliber Ammunition on CEV
051-225-1029	Stow Hand Grenades on a CEV
051-193-1002	Construct a Nonelectric Initiating/Detonating Assembly
051-193-1003	Prime Explosives Nonelectrically
051-193-1004	Construct an Electric Initiating/Detonating Assembly
051-193-1005	Prime Explosives Electrically
051-193-1007	Prime Explosives with Detonating Cord
051-193-1011	Install Dual Firing Systems

051-200-1001	Tie Knots and Lashings
051-225-1015	Abandon a CEV: Driver
051-225-1016	Direct the Evacuation of a Wounded Crew Member from the CEV
051-225-1021	Watch for the Enemy from the CEV White in a Defensive Position
051-225-1028	Abandon a CEV: Loader
051-226-1009	Abandon an AVLB: Operator
031-510-0006	Prepare for a Nuclear Attack: AVLB Commander
051-225-0304	Conduct a Slippage and Accuracy Check of the Azimuth Indicator
051-226-2001	Supervise Hydraulically Slaving an AVLB
051-226-2005	Tow a Disabled AVLB Launcher
051-226-2002	Direct Loading an AVLB Bridge into a Lowbed Trailer
051-226-2003	Direct Unloading an AVLB Bridge Off a Lowbed Trailer
051-226-2010	Retrieve the AVLB Bridge Commander
051-225-2005	Prepare the CEV for Firing Gunner
051-225-2006	Engage Targets with the Main Gun
171-122-1043	Engage Targets with the Coax Machine Gun from the Gunner's Station on an M48A5/M60 Series Tank/CEV (Less the M60A3)
171-134-0002	Engage Targets Using the Auxiliary Fire Control Instruments
051-225-2011	Prepare a Range Card for a CEV
171-123-1027	Fire the M239 Smoke Grenade Launchers on an M48A5/M60 Series Tank/CEV
051-225-2001	Abandon a CEV Gunner
051-226-2008	Abandon an AVLB: Commander
061-283-6003	Call For/Adjust Indirect Fire
051-226-0301	Recon a Potential AVLB Launcher Site
051-226-0302	Select a Route to Accommodate an AVLB Launcher
071-326-5811	Conduct a Passage of Lines with Vehicle(s)
071-332-5025	Prepare Status Report (STATREP)
031-510-0005	Prepare for a Nuclear Attack: CEV Commander
051-225-3002	Supervise Towing a Disabled CEV
051-225-3004	Supervise Raising the CEV Moldboard using the Emergency Lift Cables
051-225-3010	Direct Moving a Load by Direct Winching
051-225-3011	Operate the CEV Winch and Boom
051-225-3013	Direct Reducing Obstacles Using the CEV Moldboard
171-123-1025	Operate the Tank/CEV Searchlight
051-225-3005	Prepare the CEV for Firing: Commander
051-225-3005	Supervise Range Card Preparation for a CEV
051-225-3017	Supervise Engaging Targets with the 165mm Demolition Gun
171-122-1022	Engage Targets with a Caliber .50 M85 Machine on an M60-Series Tank/CEV
171-123-1200	Load the M85 Machine Gun

171-134-0001	Determine Range Using the Cupola-Mounted Machine Gun
171-134-0003	Supervise Engaging Targets with the 7.62mm Coax Machine Gun
051-225-3007	Supervise Personnel Handling Ammunition
051-225-3009	Supervise CEV Rigging Operations
051-225-3018	Abandon a CEV: CEV Commander
051-225-3015	Supervise the Preparation of a CEV Firing Position for Nighttime Reoccupation
051-225-3021	Select a CEV Firing Position
051-225-4001	Prepare CEV/AVLB for an Air Movement
051-225-4002	Operate a CEV Crew Qualification Range
051-225-4000	Inspect Tactical Positions
051-225-4004	Prepare Mobility/Countermobility Platoon Fire Plan
171-123-1003	Supervise Assembly Area Activities
171-123-4007	Coordinate Passage of Lines

TOTAL NUMBER OF TASKS, SECTION II 120

12 DEC 1989

TARGET AUDIENCE DESCRIPTION

MOS 19D - CAVALRY SCOUT, CMF 19

1. Projected Force Structure

GRADE	SKILL LEVEL	FY 90 AUTH	FY 90 STRENGTH%	FY91 AUTH	FY92 AUTH	FY93 AUTH
E3/E4	SL 1	4601	106%	4760	4824	4774
E5	SL 2	1636	80%	1661	1678	1679
E6	SL 3	1640	105%	1669	1679	1678
E7	SL 4	673	82%	675	680	679

STANDARDS OF GRADE AUTHORIZATION

DUTY POSITION	CODE	RANK
Scout CFV (M3)	19D10	PFC
Scout	19D10	PFC
Lt Veh Dvr	19D10	PFC
Carrier Dvr	19D10	PFC
Scout Dvr	19D10	PFC
Sheridan Crewman	19D10	PFC
(Loader, Driver, Gunner)		
Scout	19D10	SP4
CFV Dvr	19D10	SP4
Carrier Dvr	19D10	SP4
Scout Dvr	19D10	SP4
Sheridan Crewman	19D10	SP4
Liaison Asst	19D10	SP4
Gunner (Sheridan)	19D10	SP4
CFV Gunner/Asst Sqd Ldr	19D20	SGT
Asst Sqd Ldr	19D20	SGT
ITV Gunner	19D20	SGT
Section Ldr	19D20	SGT
TOW Gunner	19D20	SGT
Gunner/Asst TC	19D20	SGT
Tank Cdr (Sheridan)	19D20	SGT
Ammo Sgt	19D20	SGT
OPNS Asst	19D20	SGT
Sec/Sqd Ldr	19D30	SSG
Sqd Ldr	19D30	SSG
Tank Cdr (Sheridan)	19D30	SSG
Tank Cdr	19D30	SSG
Veh Cdr	19D30	SSG
Tank Cdr (Sheridan)	19D40	SFC
Asst Opns Sgt	19D40	SFC
Trng Mgt	19D40	SFC
Plt Sgt	19D40	PSG

2. MOS/Civilian Designation and Description.

a. MOS: 19D - Cavalry Scout
CMF: 19 - Armor

b. Additional Skill Identifiers

C2 - Dragon Gunnery

D3 - Bradley Fighting Vehicle System (BFVS)

E9 - M901 (ITV) Gunner/Crew Training

J3 - Bradley Fighting Veh Master Gunner

P5 - Master Fitness Trainer

R8 - Tank Oper/Organ Maint (M551 Sheridan)

4A - Reclassification Training

c. Security Clearance: None

d. Job Description/Major Duties at Different Skill Levels:

(1) MOSC 19D10

Combat Duties

Protects self, weapons, and equipment from chemical and other contaminants.
Applies principles of escape and evasion.
Identifies, crates, loads, transports, stores, and maintains ammunition.
Fires individual and crew served weapons.
Performs duties as crewmember on Armored Reconnaissance Airborne Assault Vehicle (ARAAV) M551 and scout vehicles.

Unit Defense

Assists in camouflage, cover and concealment of equipment and positions.
Assists in laying and removing mines and emplacing demolitions.
Assists with construction of light field fortifications.
Assists in firing of crew served weapons.

Maintenance

Performs operator maintenance on scout vehicles, Sheridan ARAAV (M551) crew served weapons, and communications equipment.

Recovery Operations

Assists in recovery operations for light wheeled and tracked vehicles.

Vehicle Operation

Operates wheeled and tracked scout vehicles and operates communications equipment.
Uses and responds to visual signals.
Operates M551 Sheridan ARAAV.
Uses radio-telephone procedures.
Operates other tracked and wheeled vehicles in armor units as designated (wheels, carriers).

Land Navigation

Locates points on map, distinguishes topographic features, and uses compass.
Uses maps, map symbols and overlays.
Navigates on ground from point to point.

Combat Reconnaissance

Serves as member of observation and listening post.
Gathers and reports information on terrain features, and enemy strength, disposition, and equipment.
Conducts route, fording, and bridge reconnaissance.
Identifies targets.
Requests and adjusts indirect and aerial fire.
Performs foot patrols.

(2) MOSC 19D20

Supervisory

Supervises scout vehicle crew in performance of duties shown in preceding level of skill.
Supervises operator maintenance of scout vehicles, Sheridan (M551), individual and crew served weapons.
Selects, organizes and supervises operation of observation and listening posts.
Supervises scout vehicle recovery operations.
Trains scout vehicle crew.
Supervises request, receipt, storage, and issue of ammunition.
Supervises subordinate ARAAV (M551) crewmembers in the execution of their duties.

Combat Duties

Leads scout vehicle crew and assists in leading scout squad.
Serves as gunner on the CFV, ITV, TOW jeep and Sheridan M551.
Performs combat duties as shown in preceding skill level.

Administration

Prepares, files, and distributes maps and overlays.
Reproduces, distributes and files operations, intelligence, administrative and unit training documents.

(3) MOSC 19D30

Supervisory

Directs tactical deployment of element in combat.
Supervises maintenance of assigned vehicles and equipment.
Supervises scout sections or squads in the performance of combat duties shown in preceding skill levels.
Supervises scout crews and Sheridan (M551) crews in the performance of combat duties shown in preceding skill levels.

Tactics

Collects, reports, and evaluates accuracy, scope and usefulness of intelligence information.
Coordinates with adjacent and supporting elements.
Evaluates routes, assembly area, and positioning for mounted combat operatio.

(4) MOSC 19D40

Supervisory

Assists in planning, organizing, directing, supervising, training, coordinating and reporting activities of the scout or armored cavalry platoon and staff sections.
Directs distribution of fire.
Supervises platoon maintenance activities.
Collects, evaluates, and assists in interpretation and dissemination of combat information.
Serves as unit master gunner.
Serves as Training Management NCO in TOE and TDA Units.

e. Related Civilian Occupation: There are no related DOT classifications for MOS 19D.

3. Anthropometric Data (5th to 95th Percentile Male)

a. Combat carrying capacity: Must be able to walk or march with load of 54 pounds for undetermined distance over various terrain.

b. Human engineering design (anthropometric) data for U.S. Army Armor crewmen from "MIL HDBK-759 (Table XIA) dated 12 March 1975.

(1) Weight (pounds): 128 to 205
(2) Stature (inches): 64.3 to 73.0
(3) Shoulder Height, Standing (inches): 52.8 to 60.8
(4) Shoulder Height, Sitting (inches): 22.3 to 26.8
(5) Functional Arm Reach (inches): 29.6 to 36.1
(6) Chest Depth (inches): 8.2 to 11.0
(7) Chest Breadth (inches): 11.0 to 13.8
(8) Hip Breadth, Standing (inches): 12.0 to 14.7
(9) Shoulder Breadth (inches): 16.6 to 20.1
(10) Shoulder Circumference (inches): 41.4 to 50.3
(11) Chest Circumference (inches): 33.6 to 43.2
(12) Waist Circumference (inches): 27.8 to 40.0
(13) Hip Circumference (inches) 33.9 to 42.7

c. Anthropometric data from "Anthropometry of United States Army Men and Women", Human Factors Vol 21 (4) was considered but not used.

4. Physical Qualifications:

a. PULHES Profile: 111121 (see AR 40-501)

b. MEPSCAT Rating: Very Heavy

c. Vision

(1) Color: Normal color vision

(2) Correctable vision of 20/20 in one eye and 20/100 in other eye.

5. Aptitude

a. AFQT

(1) Mental Category Distribution

Category	84	85	86	87	88	89
I	3%	4%	5%	5%	4%	4%
II	32%	33%	36%	38%	31%	31%
IIIA	23%	25%	24%	25%	24%	23%
IIIB	29%	28%	30%	26%	32%	32%
IV	13%	10%	5%	6%	9%	10%
AFQT AVG SCORE	55	56	59	61	56	56

(2) Quality Distribution (USAREC Goals)

Category	86	87	88	89	90
I-IIIA	65%	65%	65%	65%	65%
IIIB	25%	25%	25%	25%	23%
IV	10%	10%	10%	10%	12%

b. Prerequisite Area Aptitude Score: Combat Operations (CO)

(1) Components Include:

- Arithmetic Reasoning
- Auto & Shop Information
- Mechanical Comprehension
- Coding Speed

(2) Entry Level Score: 90

(3) Aptitude Score Distribution: CO

	84	85	86	87	88	89
80-84	0%	0%	0%	0%	0%	0%
85-89	13%	4%	9%	0%	3%	4%
90-94	13%	14%	16%	10%	12%	12%
95-99	13%	13%	13%	9%	12%	12%
100-104	15%	14%	16%	11%	12%	12%
105-109	12%	14%	13%	13%	13%	13%
110 +	34%	41%	33%	57%	48%	47%
AA AVG SCORE	104	108	105	99	109	108

c. Target Reading Grade Level: 10th Grade

6. Biographical Information

a. Civilian Education: High School Graduates

	84	85	86	87	88	89
HSG	87%	90%	84%	92%	86%	87%
GED	5%	3%	6%	5%	10%	11%
Non HSG	8%	7%	10%	3%	4%	2%

b. Percentage with English as a Second Language: Data not available

c. Gender Mix: No female soldiers.

7. Skills and Knowledge Trained:

a. Tasks trained during One Station Unit Training (OSUT).

(1) 19D10 - OSUT (M3) Bradley/CFV Cavalry Scout.

General Military Subjects

Set up and strike a shelter half tent.
Complete a 12-15 mile (20-24km) tactical foot march.
React to an inspecting officer.
Summon commander of relief.
Challenge unknown person(s).
Apprehend an intruder.
Stand an informal guard mount.
Identify, prepare and wear army issue uniforms.
Prepare for working inspection.
Prepare for an in-quarters inspection (stand by in duty uniform).
Prepare for in ranks inspection.
Prepare for in-quarters inspection (full field layout).
Execute drill movements without arms.
Execute drill movements with arms.
Perform as a squad member during the conduct of platoon drill.
Perform as a squad member during the conduct of company drill.
Report to an officer indoors.
Report to an officer outdoors.
React to an approaching officer.
React to an approaching NCO.
Identify rank.
React to passing colors.
React to the playing of "The National Anthem" and "To the Colors".
React to the playing of "The Army Song".
React to the sounding of "Reveille".
React to the sounding of "Retreat".
React to officer entering a building.

Physical Readiness Training

Attain an appropriate level of physical fitness.

First Aid

Evaluate a casualty.
Perform cardiopulmonary resuscitation (CPR) on an adult using the one man method.
Clear an object from the throat of a conscious victim.
Put on a field or pressure dressing.
Put on a tourniquet.
Prevent shock.
Apply a dressing to an open head wound.
Apply a dressing to an open abdominal wound.

Apply a dressing to an open chest wound.
Give first aid for burns.
Splint a suspected fracture.
Recognize and give first aid for heat injuries.
Give first aid for frost bite.
Transport a casualty using a one-man carry.
Transport a casualty using a two-man carry or an improvised litter.
Administer a nerve agent antidote to self (self aid).
Administer first aid to a nerve agent casualty (buddy aid).

Nuclear, Biological, and Chemical Defense

Recognize and react to chemical or biological hazards.
Put on, wear and remove your M17 series protective mask with hood.
Prepare for nuclear attack.
Decontaminate your skin and personal equipment.
Maintain your M17 series protective mask with hood.
Replace filters in an M17 series protective mask.
Put on and wear MOPP gear.
Store the M17 series protective mask with hood.
Drink, use the latrine and observe sleeping soldier in MOPP 4.
Use M8 detector paper to identify a chemical agent.
React to nuclear hazard.
Exchange MOPP gear.
Prepare a vehicle for nuclear attack.
Maintain M25 protective mask.

Engineer

Install and fire/recover an M18A1 Claymore mine.
Install booby traps.
Emplace/recover pyrotechnic early warning devices.
Install/remove the M14 blasting antipersonnel mine.
Install/remove the M16A1 mine.
Install/remove the M19 plastic antitank mine.
Install/remove the M15 antitank mine.
Install/remove the M21 antitank mine.
Locate mines by probing.
Locate mines using the AN/PSS-11 mine detector.
Construct a non-electric demolition firing system.
Construct an electric firing system.
Construct a detonating cord firing system.
Install booby traps.
Neutralize booby traps.
Install dual firing systems.
Install/remove US anti-handling devices on antitank mines.

Military Communications

Encode and decode messages using KTC 600 tactical operations code.

Use the KTC 1400 numerical cipher/authentication system.
Prepare radio set AN/PRC-77 or AN/PRC-25 for operation.
Install radio set AN/VRC-64.
Use an automated Communications Electronics Operations Instructions (CEOI).
Establish, enter or leave a radio net.
Send a radio message.
Perform Operator's Preventive Maintenance Checks and Services (PMCS) on a radio set AN/VRC-64 or AN/GRC-160 (AN/VRC-53 or AN/GRC-125).
Recognize Electronic Countermeasures (ECM) and Implement Electric Counter-Countermeasures (ECCM).
Communicate using visual signaling techniques (mounted).
Prepare/operate FM radio sets.
Operate intercommunication set AN/VIC-1 on a tracked vehicle.

Land Navigation

Determine the grid coordinates of a point on a military map using the Military Grid Reference System.
Identify terrain features on the map.
Measure distance on a map.
Determine a magnetic azimuth using a compass.
Orient a map to the ground by map-terrain association.
Determine a location on the ground by terrain association.
Determine directions using field expedient methods.
Navigate from one point on the ground to another point.
Orient a map using a compass.
Identify adjoining map sheets.
Determine azimuth using a protractor and compute back azimuths.
Convert azimuth (magnetic or grid).

US Weapons

Perform operator maintenance on an M16A1 rifle, magazine, and ammunition.
Load, reduce a stoppage and clear an M16A1/A2 rifle.
Battlesight zero an M16A1/A2 rifle.
Engage targets with an M16A1/A2 rifle.
Zero an AN/PVS-4 to an M16A1 rifle.
Mount and dismount the AN/PVS-4 on an M16A1 rifle.
Place an AN/PVS-4 into operation.
Engage targets with an M16A1 rifle using an AN/PVS-4.
Employ hand grenades.
Perform safety checks on hand grenades.
Engage enemy targets with hand grenades.
Load, reduce a stoppage and clear an M60 machine gun.
Fire an M60 machine gun.
Prepare an M72A2 law for firing; restore an M72A2 law to carrying configuration.
Apply immediate action to correct a malfunction on an M72A2 LAW.

Engage targets with an M72A2 LAW.
Load, unload and clear an M203 grenade launcher.
Engage targets with an M203 grenade launcher and apply immediate action to reduce a stoppage.
Install and fire/recover an M18A1 claymore mine.
Perform operator maintenance on an M60 machine gun and ammunition.
Field zero an M60 machine gun.
Mount and dismount an An/PVS-4 to an M60 machine gun.
Zero an AN/PVS-4 to an M60 machine gun.
Engage a target with an M60 machine gun mounted with an AN/PVS-4 night sight.
Perform operator maintenance on an M203 grenade launcher and ammmunition.
Zero an M203 grenade launcher.
Perform operator maintenance on cal .50 M2 HB machine gun and ammunition.
Set headspace and timing on a cal .50 M2 HB machine gun.
Load, reduce a stoppage, unload and clear a caliber .50 M2 HB machine gun.
Perform misfire procedures on a 25mm automatic gun.
Engage targets with the 25mm automatic gun using the ISU in an M2/M3 Bradley.
Perform misfire procedures on the TOW on an M2/M3 Bradley.
Boresight a TOW Launcher on an M2/M3 Bradley.
Engage targets with the TOW on an M2/M3 Bradley.
Load/unload an M16A1/A2 rifle magazine.
Load/unload and clear an M240C machine gun on an M2/M3 Bradley.
Boresight an M240C machine gun on an M2/M3 Bradley.
Perform misfire procedures on the M240C machine gun on an M2/M3 Bradley.
Engage targets with an M24)C machine gun using the ISU in an M2/M3 Bradley.
Load/unload and clear 25mm automatic gun on an M2/M3 Bradley.
Boresight a 25mm automatic gun on an M2/M3 Bradley.
Zero the 25mm automatic gun and M240C machine gun to the ISU on the ISU on the M2/M3 Bradley.

Individual Tactical Training

Camouflage your defensive position.
Camouflage yourself and your individual equipment.
Move over through or around obstacles (except minefields).
React to flares.
React to indirect fire.
Construct individual fighting positions.
Emplace/recover pyrotechnic early warning devices.
Select temporary fighting positions.
Estimate range.
Call for/adjust indirect fire.
Use challenge and password.
Move under direct fire.

Report enemy information.
Practice noise, light, and litter discipline.
Clear a field of fire.

Intelligence

Visually identify threat aircraft.
Recognize and identify friendly and threat armored vehicles.
Collect/report information-SALUTE.
Prepare individual equipment for patrol.
Collect data for classification of a route.
Estimate range.

Vehicle Specific

Maintain operator's part of an equipment record folder.
Perform operator's maintenance on optical equipment.
Evade enemy antitank guided missiles (ATGM)
Recover a mired tracked vehicle using similar vehicle and TOW cable.
Perform preventive maintenance checks and services on the hull of a Bradley M2/M3.
Start/stop the engine on a M2/M3 Bradley.
Break/join track on an M2/M3 Bradley.
Shut down the driver's station on an M2/M3 Bradley to include crew area.
Drive an M2/M3 Bradley.
Extinguish a fire on an M2/M3 Bradley.
Perform emergency evacuation procedures on the M3 Bradley.
Abandon and destroy an M3 Bradley.
Drive an M2/M3 Bradley using night vision equipment.
Operate an M2/M3 Bradley in water.
Start an M2/M3 Bradley engine using auxiliary power.
Load/unload 25mm ready boxes on an M2/M3 Bradley.
Perform operator maintenance on a 25mm automatic gun on an M2/M3.
Install/remove an M240C machine gun on an M2/M3 Bradley.
Perform operator's maintenance on an M240/M240C machine gun.
Load/unload and stow smoke grenades for the M257 smoke grenade launchers on an M2/M3 Bradley.
Stow ammunition and equipment on an M3 Bradley.
Maintain the air cleaner system on an M998-series vehicle.
Maintain the battery system on an M998-series vehicle.
Maintain the brake system on an M998-series vehicle.
Maintain the cooling system on an M998-series vehicle.
Maintain the engine on an M998-series vehicle.
Maintain the fuel system on an M998-series vehicle.
Maintain the steering system on an M998-series vehicle.
Maintain the transmission system on an M998-series vehicle.
Start an M998-series vehicle using auxiliary power.
Drive an M998-series vehicle.

OTHER TASKS AND SUBJECTS TAUGHT IN RESIDENT TRAINING

Role of the Army.
Responsibilities of the soldier.
Military justice.
Code of conduct.
Opposing forces orientation.
Law of land warfare/SAFDA.
Orientation.
Personal affairs.
Alcohol and drug abuse prevention control program.
Equal opportunity and prevention of sexual harassment.
Physical fitness training (total fitness).
Detect targets.
Engage targets in an NBC environment.
Apply night fire techniques with the M16A1 rifle.
Apply integrated act of automatic rifle shooting, using automatic firing positions.
Perform preventive maintenance checks and services on the turret of an M2/M3 Bradley.
Place an AN/PVS-5 (night vision goggles) into operation.
Fire smoke grenades from the M257 grenade launcher on an M2/M3 Bradley.
Perform misfire procedures on an M257 smoke grenade launcher on in M2/M3 Bradley.
Engage targets with the TOW on an M2/M3 Bradley.
Prepare a range card for an M3 Bradley.

(2) 19D10 - OSUT (M113) M113 Cavalry Scout.

General Military Subjects

Establish a bivouac site.
Complete a 12-15 mile (20-24 km) tactical foot march.
React to an inspecting officer.
Summon commander of relief.
Challenge unknown persons (night).
Apprehend an intruder.
Recite the general orders.
Explain information on an LES.
Inspections.
Identify chain of command.
Execute drill movements without arms.
Execute drill movements with arms.
Report to an officer indoors.
Report to an officer outdoors.
React to an approaching officer.
React to an approaching NCO.
Identify rank.
React to passing colors.

React to the playing of "The National Anthem" and "To the Colors".
React to the playing of "The Army Song".
React to the sounding of "Reveille".
React to the sounding of "Retreat".
React to officer entering a building.
Tell military time.

Physical Readiness Training

Conditioning obstacle course.
Confidence obstacle course.
Attain an appropriate level of physical fitness.

First Aid

Evaluate a casualty.
Perform mouth-to-mouth Resuscitation (CPR).
Clear an object from the throat of a conscious victim.
Put on a field or pressure dressing.
Put on a tourniquet.
Prevent shock.
Apply a dressing to an open head wound.
Apply a dressing to an open abdominal wound
Apply a dressing to an open chest wound.
Give first aid for burns.
Splint a suspected fracture.
Recognize and give first aid for heat injuries.
Give first aid for frostbite.
Protect yourself against heat.
Protect yourself against cold.
Protect yourself against biting insects.
Protect yourself from diarrhea and dysentery.
Practice personal hygiene to maintain fitness.
Transport a casualty using a one-man carry.
Transport a casualty using a two-man carry or an improvised litter.
Administer a nerve agent antidote to self (self aid).
Administer first aid to a nerve agent casualty (buddy aid).

Nuclear, Biological, and Chemical Defense

Prepare for NBC attack.
Recognize and react to chemical or biological hazard.
Put on, wear, and remove your M17-series protective mask with hood.
Decontaminate your skin and personal equipment.
React to nuclear hazard.
Maintain your M17-series protective mask with hood.
Replace filters in your M17-series protective mask.
Put on and wear MOPP gear.
Exchange MOPP gear.
Store the M17-Series protective mask with hood in its carrier.

Drink, use the latrine, and observe sleeping soldier in MOPP 4.
Prepare a vehicle for nuclear attack.
Use M9 detector paper to detect chemical agent.
Maintain M25 protective mask.

Engineer

Install/remove the M16A1 antipersonnel mine.
Install/remove the M19 plastic antipersonnel mine.
Emplace/recover pyrotechnic early warning devices.
Install/remove the M14 blasting antipersonnel mine.
Install/remove the M15 antitank mine.
Install/remove the M21 antitank mine.
Locate mines by probing.
Locate mines using the AN/PSS-11 mine detector.
Construct a nonelectric initiating/detonating assembly.
Construct an electric initiating/detonating assembly
Install booby traps.
Neutralize booby traps.
Install dual firing systems.
Install/remove US anti-handling devices on antitank mines.
Install and fire/recover an M18A1 Claymore mine.

Military Communications

Prepare radio set AN/PRC-77 or AN/PRC-25 for operation.
Install radio set AN/VRC-64.
Use an automated Communications Electronics Operation Instructions (CEOI).
Establish, enter or leave a radio net.
Send a radio message.
Perform Operator's Preventive Maintenance Checks and Services (PMCS) on a radio set AN/VRC-64 or AN/GRC-160 (AN/VRC-53 or AN/GRC-125).
Recognize Electronic Countermeasures (ECM) and Implement Electric Counter-countermeasures (ECCM).
Communicate using visual signalling techniques (mounted).
Prepare/operate FM radio sets.
Operate intercommunication set AN/VIC-1 on a tracked vehicle.
Encode and decode messages using KTC 600 tactical operations code.
Use the KTC 1400 numerical cipher/authentication system.

Land Navigation

Determine the grid coordinates of a point on a military map using the military grid reference system.
Identify terrain features on a map.
Measure distance on a map.
Determine a magnetic azimuth using a compass.
Orient a map to the ground by map terrain association.
Determine a location on the ground by terrain association.

Determine direction using field expedient methods.
Navigate form one point on the ground to another point.
Orient a map using a compass.
Identify adjoining map sheets.
Determine azimuth using a protractor and compute back azimuth.
Convert azimuth (magnetic or grid).

US Weapons

Perform operator maintenance on an M16A1 rifle, magazine, and ammunition.
Load, reduce a stoppage, and clear an M16A1 rifle.
Battlesight zero an M16A1/A2 rifle.
Engage targets with an M16A1/A2 rifle.
Zero an AN/PVS-4 to an M16A1 rifle.
Mount and dismount the AN/PVS-4 on an M16A1 rifle.
Place an AN/PVS-4 into operation.
Engage targets with an M16A1 rifle using an AN/PVS-4.
Identify and employ hand grenades.
Perform safety checks on hand grenades.
Engage enemy targets with hand grenades.
Load, reduce a stoppage, and clear an M60 machine gun.
Fire an M60 machine gun.
Prepare an M72A2 LAW for firing; restore an M72A2 LAW to carrying configuration.
Apply immediate action to correct a malfunction on an M72A2 LAW.
Engage targets with an M72A2 LAW.
Load, unload and clear an M203 grenade launcher.
Engage targets with M203 grenade launcher and apply immediate action to reduce a stoppage.
Perform operator maintenance on an M60 machine gun and ammunition.
Field zero an M60 machine gun.
Mount and dismount an AN/PVS-4 to an M60 machine gun.
Zero an AN/PVS-4 to an M60 machine gun.
Engage a target with an M60 machine gun mounted with an AN/PVS-4 night sight.
Perform operator maintenance on an M203 grenade launcher and ammunition.
Zero an M203 grenade launcher.
Perform operator maintenance on caliber .50 M2 HB machine gun and ammunition.
Set headspace and timing on a caliber .50 M2 HB machine gun.
Load, reduce a stoppage, unload and clear a caliber .50 machine gun.
Engage targets with caliber .50 M2 HB machine gun on an M113/M113A1 (low-profile cupola).
Prepare a DRAGON for firing.
Conduct a pre-operational inspection and perform operational maintenance on a DRAGON tracker and round.
Determine if a target is engageable with a DRAGON.
Demonstrate correct DRAGON firing positions.

Mount and dismount a Cal .50 HB M2 machine gun on an M113A1.
Perform immediate action procedures for a DRAGON misfire.
Prepare an anti-armor range card (TOW, DRAGON, 106mm, or 90mm RCLR).
Assemble a TOW 2 launcher.
Perform operator maintenance on a TOW 2 launcher.
Conduct a system self-test and pre-operation inspection of a TOW 2 launcher and encased missile.
Determine if a target can be engaged by TOW.
Load, arm, and unload an encased TOW missile.
Engage a target with a TOW 2.
Perform immediate action for TOW 2 misfire.

Individual Tactical Training

Camouflage your defense position.
Camouflage yourself and your individual equipment.
Move over, through, or around obstacles (except minefields).
React to flares.
React to indirect fire.
Construct individual fighting positions.
Select temporary fighting positions.
Report enemy information.
Call for/adjust indirect fire.
Use challenge and password.
Move under direct fire.

Intelligence

Visually identify threat aircraft.
Recognize and identify friendly and threat armored vehicles.
Prepare individual equipment for patrol.
Collect data for classification of a route.
Estimate range.

Vehicle Specific

Maintain the battery system on an M998-series vehicle.
Maintain the brake system on an M998-series vehicle.
Maintain the cooling system on an M998-series vehicle.
Maintain the engine on an M998-series vehicle.
Maintain the fuel system on an M998-series vehicle.
Maintain the steering system on an M998-series vehicle.
Maintain the transmission system on M998-series vehicle.
Start an M998-series vehicle using auxiliary power.
Drive an M998-series vehicle.
Maintain operator's part of an equipment record folder.
Perform operator's maintenance on a track vehicle.
Operate a tracked vehicle in water.
Drive a track vehicle (M113A1 or M901).

Conduct a system self-test and pre-operation inspection of a TOW 2 launcher and encased missile.
Evade Enemy Antitank Guided Missiles (ATGM).
Recover a mired tracked vehicle using similar vehicle(s) and tow cables.
Extinguish a fire on a track vehicle (M113A1 or M901 ITV).
Drive a tracked vehicle with night vision devices, infrared equipment, and blackout drive.
Operate M243 smoke grenade launcher on an ITV (M901).
Mount, stow and dismount on M60 machine gun and an ITV (M901).
Erect launcher from stow position.
Stow the launcher on an ITV (M901).
Prepare an ITV (M901) dual launcher for loading.
Perform preventive maintenance on optical equipment.
Conduct a system check-out procedure on an ITV TOW (M901).
Operate light controls and M19 infrared periscope on a tracked vehicle.
Perform troubleshooting procedures on an M998-series vehicle (HUMMV).
Engage a target with an ITV TOW 2 (M901A1) dual launcher.
Perform immediate action for an ITV (M901) dual launcher misfire.
Operate the ITV (M901) dual launcher using emergency action procedures.
Load a dual launcher with encased missile(s) return to stow position.
Reload the ITV (M901) dual launcher.

OTHER TASKS AND SUBJECTS TAUGHT IN RESIDENT TRAINING

Hand-to-hand combat.
Defensive driving course.
Soldier responsibilities and U.S. Army heritage and traditions.
Military justice and discipline.
Code of conduct.
Threat orientation.
Law of land warfare/SAEDA.
Personal affairs.
Alcohol and drug abuse prevention control program.
Equal opportunity.
Physical fitness training (healthy life styles & habits).
Identify and wear military uniforms.
Load and unload an M16A1 rifle magazine.
Rifle Bayonet/Pugil Fighting/Bayonet Assault Course.
Perform duties as a road guide.
Clear fields of fire.
Practice noise, light, and litter discipline.
Advanced vehicle identification.
Place an AN/PVS-5 (night vision goggles) into operation.

b. Tasks trained during 19D Cavalry Noncommissioned Officer Advanced Course:

Plan and Supervise Positioning M-8 Alarm.
Collect and Report Total Radiation Dose.
Conduct Demolition Missions.
Call For/Adjust Indirect Fire.
Plan a Tactical Roadmarch.
Issue a Platoon Fragmentary Order.
Issue an Oral Operation Order (OPORD).
Coordinate a Passage of Lines.
Prepare a Situation Report (SITREP).
Conduct a Tactical Roadmarch.
Build a Quick Smoke Screen.
Plan Platoon Rearm and Resupply
Conduct Platoon Rearm and Supply.
Plan Reconnaissance of an Urban Area.
Supervise Placement of Observation Posts.
Conduct a Relief in Place at Platoon Level.
Conduct a Screening Mission.
Plan a Screening Mission.
Conduct Actions on Contact.
Conduct a Hasty River Crossing.
Conduct Displacement at Platoon Level
Direct Operations of Live Fire Ranges.
Plan Range Operations.
Conduct a Mounted Patrol.
Plan a Mounted Patrol.
Conduct Armor Tactical Navigation.
Coordinate with Adjacent Units.
Plan a Hasty River Crossing.
Conduct a Platoon Level During/After Action Review (DAR/AAR) (audit).
Conduct Quartering Party Activities.
Conduct Troop Leading Procedures.
Direct Emplacement and Activation of PEWs.
Plan a Dismounted Patrol.
Conduct a Dismounted Patrol.
Supervise Platoon Maintenance.
Conduct Route Reconnaissance at Platoon Level.
Conduct Area Reconnaissance at Platoon Level.
Conduct Zone Reconnaissance at Platoon Level.
Plan the Reconnaissance of an Obstacle.
Conduct Reconnaissance of an Urban Area.
Conduct Reconnaissance of an Obstacle.
Control Tactical Movement of a Scout Platoon.
Plan Reconnaissance Mission.
Prepare a Platoon Fire Plan.
Conduct Occupation of an Assembly Area.
Direct Consolidation/Reorganization on the Objective.
Supervise COFT Programs.

Inspect Logbooks and Maintenance Records.
Plan NBC Operations.
Conduct NBC Operations.
Supervise Personnel Handling Ammunition.
Plan/Establish Observation Posts (OP) for Tactical Operations.
Prepare an Oral Operation Order.
Evaluate a Bridge/Vehicle.
Supervise Vehicle Recovery Operations.

55B

TARGET AUDIENCE DESCRIPTION
MOS 55B

A. CURRENT AND PROJECTED FORCE STRUCTURE. (Data Source is PMAD)

GRADE	SKILL LEVEL	CY AUTH	STRENGTH %	CY+1 AUTH	CY+2 AUTH	CY+3 AUTH
E3-E4	SL1	1955	117.0%	2006	2063	2074
E5	SL2	623	133.9%	648	666	672
E6	SL3	322	110.9%	319	320	324
E7	SL4	281	96.8%	294	286	287

B. STANDARDS OF GRADE AUTHORIZATION. (Data Source is AR 611-201)

DUTY POSITION	CODE	RANK
Ammunition Specialist	55B10	PFC
Ammunition Specialist	55B10	SP4
Ammunition Specialist	55B20	SGT
Rough Terrain Container Handler	55B10B1	PFC
Rough Terrain Container Handler	55B10B1	SP4
Rough Terrain Container Handler	55B20B1	SGT
AMMO Maintenance NCO	55B30	SSG
AMMO Supply NCO	55B30	SSG
AMMO Advisor	55B30	SSG
Section Chief	55B40	SFC
AMMO Supply SGT	55B40	SFC
Platoon SGT	55B40	SFC

C. MOS/CIVILIAN DESIGNATION AND DESCRIPTION. (Data Sources are AR 611-201, AR 611-101 and AR 611-112)

1. OPERATOR MOS: 55B Ammunition Specialist

2. ADDITIONAL SKILL IDENTIFIERS: B1 Rough Terrain Container Handling and Operation

P5 Master Fitness Trainer

3. SECURITY CLEARANCE: CONFIDENTIAL

4. JOB DESCRIPTION: Major duties at the different skill levels are:

a. MOSC 55B10. Assists in receipt, storage, issue, maintenance, and inspection of ammunition, ammunition components and explosives and in ammunition destruction procedures.

b. MOSC 55B20. Receives, stores, issues, and assists in preparing ammunition, components and explosives for transport.

c. MOSC 55B30. Supervises the receipt, storage, issue and preparation

of ammunition, components and explosives; and the maintenance of conventional ammunition, components, containers, rockets, chemical and non-nuclear special ammunition.

d. MOSC 55B40. Supervises ammunition storage platoon receipt, storage and issue operations.

5. RELATED CIVILIAN OCCUPATION:

a. DOT classification.

(1) Magazine Keeper - 222.367-038

(2) Inventory Clerk - 222.387-026

(3) Explosvie Operator II - 737.687-046

(4) Renovation Foreman - 694.132-010

b. Federal Civil Service Classification.

(1) Munition Handler - WG 6511

(2) Power Handler - WG 6510

(3) Supply Clerk - GS 2040

(4) Distribution Facilities and Storage Manger - GS 2030

(5) Ammunition Loading Inspector - WG 6506

(6) Explosives Operator - WG 6504

(7) Explosives Operator, Breakdown - WG 6504

(8) Explosives Operator, Loading - WG 6502

(9) Power & Explosives Inspector - WG 6507

D. ANTHROPOMETRIC DATA (5th to 95th PERCENTILE). (Data Source is MIL STD 1472C)

1. Shoulder Height, Standing: 133.6 to 154.2 cm

2. Shoulder Height, Sitting: 54.2 to 65.4 cm

3. Shoulder Height, Kneeling: 36.1 to 55.6 cm

4. Functional Arm Reach: 72.6 to 90.9 cm

E. PHYSICAL QUALIFICATIONS:

1. COMBAT CARRYING CAPACITY: Frequently lifts 72 lbs 4 feet and carrys 10 feet. (Data Source is Appendix B, AR 611-201)

2. PULHES PROFILE: 222221 (Data Source is AR 611-1)

3. MEPSCAT RATING:
(Data Source is AR 611-1)

4. VISION:

a. COLOR: Must possess normal color vision.

b. ACUITY: Correctable vision of 20/20 in one eye; 20/100 in the other eye.

F. APTITUDE DESCRIPTION OF THE TARGET POPULATION:

1. AFQT MENTAL CATEGORY DISTRIBUTION TOTAL FORCE GRADES E-1 THRU GRADE E-6: (Data Source is EMF)

	CY
I	2.1
II	19.3
IIIA	18.9
IIIB	37.5
IV	22.2

2. QUALITY DISTRIBUTION - USAREC ANNUAL PRODUCTION AND GOALS (Data Sources are ATRRS and Request System)

	CY
I-IIIA	5
IIIB	30
IV	15

3. AFQT MEAN SCORE: 101 (Data Source is EMF)

4. PREREQUISITE AREA APTITUDE SCORE: (Data Source is EMF)

a. COMPONENTS OF APTITUDE AREA INCLUDE: Ordnance (Data Source is ATRRS)

Arithmetic Reasoning
English Comprehension
Mechanical and Physical Science Comprehension

b. APTITUDE AREA ENTRY LEVEL SCORE: 95 (Data Source is ATRRS)

c. APTITUDE AREA SCORE DISTRIBUTION: OD (Data Source is EMF)

	CY
80-84	2.5
85-89	5.6
90-94	23.0
95-99	24.0
100-104	14.0
105-110	10.0
111-114	6.6
115-119	6.2
120-160	8.1

5. TARGET READING GRADE LEVEL: (Data Source is AR 310-3)

SL1 - 12
SL2 - 12
SL3 - 12

TOTAL ALL SKILL LEVELS - 12

G. DEMOGRAPHIC INFORMATION: (Data Source is EMF)

1. CIVILIAN EDUCATION:

HSG	85%
GED	11%
NON HSG	4%

2. PERCENTAGE WITH ENGLISH AS A SECOND LANGUAGE: 5.5%

3. GENDER MIX: MALE - 90% FEMALE - 10%

H. MILITARY EXPERIENCE: AIT Graduates (Data Source is ATRRS)

I. SKILLS AND KNOWLEDGE TRAINED: (Data Source is AR 611-201)

1. Tasks trained during Advanced Individual Training (AIT)

a. Defends position and self against enemy attack.

b. Employ cover, concealment and camouflage.

c. Employs individual weapons.

d. Protects self, weapons, and equipment from chemical and other contamination.

e. Performs preventative maintenance and assists in organizational maintenance on weapons and equipment.

f. Performs land navigation functions.

g. Administers first aid.

h. Applies field sanitation methods.

i. Performs drill and ceremonies and other post, camp, and station duites.

j. Applies security and safety measures.

k. Loads, unloads, stacks and stores ammunition, including guided missiles.

l. Issues ammunition supplies.

m. Prepares ammunition for shipment on all types of transportation and performs necessary bracing and staying of loads.

n. Packs, packages, crates, stencils, weighs and bands ammunition for shipment or storage.

o. Prepares loads, using web slings, containers, platforms, skid boards and ancilliary hardware.

p. Inventories ammuniton in storage.

q. Identifies ammunition by types of physical characteristics.

r. Operates forklifts with lift capacity of 10,000 lbs or less in moving ammunition supplies in magazines, warehouses and open storage areas.

s. Assists in upkeep operations area and facilities.

t. Performs organizational maintenance operations to: remove rust and corrosion, repair packages, paint and mark, use equipment such as buffers, brushes and strapping machines.

u. Performs direct support maintenance functions, to include: replacement of fuzes, performance of electrical checks, and provision of assistance to missile maintenance personnel.

v. Performs preventative maintenance on mechanics common hand and power tools and specialized ammunition maintenance tools.

w. Performs detection and decontamination procedures involving chemical agents.

x. Assists in ammunition serviceability inspections.

y. Makes visual inspections and monitors ammunition in storage.

z. Assists in emergency destruction of ammunition.

aa. Assists explosive ordnance personnel in routine destruction of unserviceable and irreparable ammunition and explosives.

2. Tasks trained during advanced NCO Education.

a. Performs duties in preceding level of skill and provides technical guidance to lower grade personnel in accomplishment of these duties.

b. Prepares periodic reports by compiling statistics on issue receipt and storage functions.

c. Supervises loading, unloading, movement and storage at ammunition.

d. Supervises ammunition packaging operations.

e. Performs as technical advisor.

f. Plans and organizes ammunition storage facilities.

g. Plans maintenance operations.

h. Estimates requirements for personnel, tools, equipment and supplies for maintenance operations.

i. Supervises stock control and accounting operations.

j. Supervises non-nuclear ammunition maintenance operations.

k. Supervises setting up and camouflaging of ammunition supply/maintenance units or installations.

l. Assigns duties to subordinate personnel.

m. Coordinates unit requirements relative to personnel, equipment transportation and maintenance.

n. Ensures proper and safe handling of ammunition.

TARGET AUDIENCE DESCRIPTION / BASE LINE MOS DESCRIPTION

MOS 55D EXPLOSIVE ORDNANCE DISPOSAL (EOD) SPECIALIST

A. CURRENT INVENTORY and PROJECTED FORCE STRUCTURE. (Data Source for projected force structure is PMAD through the FORECAST system. Current inventory figures are obtained from the EMF through the FORECAST system.)

GRADE	SKILL LEVEL	FY90 AUTH	INVENTORY STRENGTH %	FY91 AUTH	FY92 AUTH	FY93 AUTH
E3	SL1	100	63	101	101	94
E4	SL1	39	269	72	72	71
E5	SL2	224	84	174	174	175
E6	SL3	258	100	228	229	231
E7	SL4	140	83	142	141	138
E8	SL5	89	98	86	86	86
E9	SL5	14	128	14	14	14

B. STANDARDS of GRADE AUTHORIZATIONS. (Data Source is AR 611-201.)

LINE	DUTY POSITION	CODE	RANK	AUTHORIZED* POSITIONS* 1 2 3 4 5 6 7 8 9 10	EXPLANATORY NOTES
1	EOD Assistant	55D10	PFC	1 1 1 1	This pattern will be applied to combine positions in: a. EOD response section b. Nuclear, chemical, VIP, or conventional augmentation teams. c. EOD control center d. EOD control group e. EOD response team augmentation.
2	EOD Assistant	55D10	SPC	1	
3	EOD Specialist	55D20	SGT	1 1 1 2 2 2	
4	EOD Team Leader	55D30	SSG	1 1 1 2 2	
Technical Escort (TE)		**(ASI J5)**			
5	TE EOD Assistant	55D10J5	SPC	1 1 1 2 2 2 2 2	Grades of additional positions will be in same pattern
6	TE EOD Specialist	55D20J5	SGT	1 1 1 2 2 2 3 4 4 5	
7	TE EOD Squad Ldr	55D30J5	SSG	1 1 1 2 2 2 2 3 3	
				Explanatory notes	
8	EOD Section NCO	55D40 55D40J5	SFC	a. In EOD response section b. In operations section OF TE unit	

9	Operations NCO	55D40	SFC	In EOD detachment operation section; 55D40J5 EOD team (FA); EOD control center team; EOD control group HQ; weapons/munitions platoon of MI tech intel co.; security, plans, and operations section; missile /munitions branch of HHC & Special troops, TAACOM; tech escort unit.
10	Liaison NCO	55D40	SFC	In EOD: a. liaison augmentation team b. Control group HQ liaison section
11	EOD Staff NCO	55D50	MSG	In EOD control center, control group (HQ) or when required in augmentation team to security, operations, training & intelligence section of MI tech intel companies.
12	Detachment NCO	55D50	MSG	As principal NCO in EOD detachment
13	EOD Sergeant Major	55D50	SGM	As principal NCO in control center team or control group HQ .

* Blank spaces in this column indicate not applicable

C. MOS/CIVILIAN DESIGNATION and DESCRIPTION. (Data Source is AR 611-201, 611-101 & AR 611-112).

1. CAREER MANAGEMENT FIELD:	55	AMMUNITION
2. OPERATOR MOS:	55D	EOD Specialist
3. ADDITIONAL SKILL IDENTIFIERS:	A5	Technical Intelligence
	J5	Technical Escort
	P5	Master Fitness Trainer
	R5	Research, Development, Test, and Evaluation
4. Special Qualification Identifiers	H	Instructor
	L	Linguist
	X	Drill Instructor
	2	Training Developer

5. Security Clearance: Secret with background Investigation

6. Job Description: Explosive Ordnance Disposal Specialist
(Data source is AR 611-201)

Major duties: The EOD specialist supervises or performs explosive ordnance disposal activities. Duties for each skill level are:

a. MOS 55D10. Assist in the location, identification, removal, and destruction of explosive ordnance other than nuclear fission or fusion materials.

b. MOS 55D20. Locates, identifies, assists in rendering safe, removes or destroys domestic and foreign non-nuclear explosive ordnance, chemical agent munitions, and foreign biological munitions, and other explosive compounds. When assigned to a nuclear EOD augmentation team will assist in the performance of detailed render safe procedures and disposal procedures on Army nuclear weapons, initial render safe procedures of other U.S. Military services after procedural determination is made by EOD officer.

c. MOS 55D30. Functions as Team Leader, supervises and performs duties in previous skill levels and provides technical and professional guidance to lower grade personnel in accomplishment of these duties.

d. MOS 55D40. Functions as Operations NCO, liaison NCO, supervises and performs duties of previous skill levels, provides technical and professional guidance to lower grade personnel in accomplishment of these duties.

e. MOS 55D50. Functions as Detachment NCO in a unit, Staff NCO at a Major Command or as Sergeant Major in a control group or headquarters, able to perform at previous skill levels, supervises EOD activities and provides technical and professional guidance to others.

7. Related Civilian Occupation: (Data source is AR 611-201)

		DOT Classification
a.	Assembler, mechanical ordnance	737.684-010
b.	Bomb Loader	737.684-014
c.	Fuze Assembler	737.684-022
d.	Production Assembler	737.684-034
e.	Demolition specialist (ordnance)	737.684-034
f.	Munitions Destroyer (FCSC)	WG 6505

D. DEMOGRAPHIC INFORMATION: (Data Source is EMF through the FORECAST System)

1. Civilian Education: (11/06/89)

	FY90 #	%
High School Graduate	402	55.58
GED	58	8.00
1 Year College	24	15.86
2 Years College	82	11.31
3 Years College	35	4.86
4 Years College	28	3.86
5 Years or more College	2	.27

2. Percent with English as a Second Language:

Hispanic	1.96%
Other	2.09%

3. Gender Mix: 3.83% (31 females as of Dec 1989.)

E. ANTHROPOMORPHIC DATA (5th percentile female to 95 percentile male). (Data source is Mil Std 1472C).

		MALE	
		5 %	95%
1.	Weight - clothed	107.6 lbs	198.8 lbs
2.	Stature - clothed	61.8 in	74.4 in
3.	Functional reach	25.2 in	34.1 in
4.	Functional reach, extended	28.9 in	39.8 in
5.	Overhead reach height	73.0 in	90.8 in
6.	Overhead reach, sitting	46.2 in	57.9 in
7.	Functional leg length	39.2 in	50.3 in
8.	Kneeling height	45.1 in	53.9 in

F. PHYSICAL QUALIFICATIONS: (Data source is AR 611-201)

1. General Physical Data:
   a. Carrying capacity: Frequently lifts 95 pounds and carries up to 100 meters.

   b. Special clothing requirements: Frequently required to wear M3, Toxicological Agent Protective suit or Rocket Fuel Handlers protective suit or nuclear contamination protective clothing.

2. PULHES Profile:

PULHES
111121

P- physical capacity or stamina
U- upper extremities
L- lower extremities
H- hearing and ears
E- eyes
S- psychiatric

3. Mepscat Rating (Physical Demands rating): Very Heavy

4. Vision: Normal color vision and correctable to 20/20 in both eyes.

5. Must possess dexterity in both hands

6. Must be able to hear normal voice communications at a distance of 25 feet.

7. Meet personnel reliability program criteria contained in AR 50-5 and AR 50-6.

8. Non-allergic to explosive compounds.

9. Be a U.S. citizen.

10. Be an EOD duty volunteer.

G. APTITUDE DESCRIPTION OF TARGET POPULATION: (Data source is EMF through the MANPRINT Database)

1. Armed Forces Qualification Test Mental Category for target population for pay grades E-1 through E-9.

	NUMBER	% MC I	% MC II	% MC IIIA	% MC IIIB	% MC IV
E1	16		56.25	31.25	12.50	
E2	14		78.57	14.28	7.14	
E3	18	22.22	61.11	16.66		
E4	90	10.00	57.77	20.22	12.22	
E5	170	9.41	53.56	21.17	14.70	1.17
E6	247	11.33	54.65	22.67	10.12	1.212
E7	106	13.20	52.83	20.75	13.20	
E8	57	24.56	49.12	10.52	10.52	5.26
E9	15	20.00	46.66	33.33		

2. Quality Distribution - USARAC Annual Production Goals for MOS 55D10. (Data source is the SEABROOK Report through the FORECAST system)

CATEGORY	% CURRENT YEAR
I-IIIA	84
IIIB	12.8
IV	2.8

3. Perquisite Aptitude Area Score: General Maintenance
(Data source is EMF through the FORCAST system)
   a. Components of aptitude area include:
      Mathematics Knowledge
      General Science
      Electronics Information
      Automotive Shop
   b. Aptitude ~~area entry~~ level score: 105

4. General Maintenance Aptitude Area score distribution by number and percentage: (Data source is EMF.)

GRADE	E2 (2)		E3 (1)		E4 (62)		E5 (139)		E6 (185)		E7 (47)		E8 (9)	
#	#	%	#	%	#	%	#	%	#	%	#	%	#	%
79-83							1	.71						
84-88							2	1.43						
89-93							2	1.43						
94-98					1	1.61	1	.71	4	2.16	3	6.38	1	11.00
99-103							15	10.79	11	5.94	2	4.23		
104-108	1	50												
109-113	1	50			10	16.12	28	20.14	19	10.2	3	6.38		
114-118					15	24.19	20	14.38	37	20.00	9	19.14	1	11.00
119-123					22	35.48	20	14.38	47	25.40	5	10.63	3	33.00
124-128					[illegible]	[illegible]	25	17.98	36	19.45	12	25.53	3	33.00
129-159			1	100	7	11.29	25	17.98	31	16.75	13	27.65	1	11.00
160														

5. Target Reading Grade level:

Skill Level 1	12
Skill Level 2	12
Skill Level 3	12
Skill Level 4	12
Skill Level 5	12
Total all Skill Levels	12

H. TRAINING HISTORY: Advanced Individual Training Graduate, Course Length, TTHS Account, Additional Special Training. (Data source is ATRRS through the FORCAST system)

1. Training

a. Ammunition Specialist 55B10	6 wks 3 dys
b. Phase 1 Training - Eglin AFB, FL	10 wks 2 dys
c. Phase 2 Training - Indian Head, MD	17 wks 2 dys
d. Phase 3 Training - Redstone Arsenal, AL	2 wks
e. Basic Non-commissioned Officer, Redstone Arsenal, AL	7 wks 4 dys
f. Advanced Non-commissioned Officer, Redstone Arsenal, AL	5 wks
g. Sergeant Major's Academy, Fort Bliss, TX	24 wks
h. 55DJ5 Tech Escort, Redstone Arsenal, AL	4 wks

2. TTHS Account Snapshot (September 1989)

E1/3	E4	E5	E6	E7	E8	E9
28	0	5	4	0	2	1

(Data source is DAPC-45.)

I. SKILLS and KNOWLEDGE TRAINED: (Data source is AR 611-201)

Identifies characteristics, markings and functioning of all types of domestic and foreign conventional, chemical, and foreign biological munitions and fuzing.

Researches and interprets EOD reference technical publications.

Assists in the destruction of all types of military, commercial and/or improvised explosives.

Reconnoiters area to detect, identify, and classify unexploded ordnance and other hazardous materiel.

Uses radiac detection instruments and other devices to assist in determining hazards.

Decontaminates ordnance, tools and materiel as required.

Provides assistance relative to closing roads of roads to isolate explosive and contaminated areas.

Constructs protective means, such as barricades to reduce the blast effect of explosive products.

Removes obstructions surrounding explosive ordnance using hand tools or rigging

equipment.

Assists in the evacuation of explosive ordnance by the use of proper equipment and removal all hazards from area.

Provides technical data for reports or briefings.

Operates and performs maintenance on specialized tools and equipment.

Supports law enforcement, fire fighters, and other public service officers.

Assist in determining, accomplishing, or developing render safe procedures for non nuclear ordnance.

Uses safety precautions pertaining to explosive materiel, fissionable materiel, and other hazards.

Photographs, reads and interprets x-rays, diagrams, and drawings for technical intelligence or incidents.

Identifies various nuclear weapons or components by physical appearances, markings, or nomenclature.

Evaluates existing and potential hazards associated with nuclear components and nuclear contamination.

1. Team Leader Responsibilities and obligations:

Determines or develops render safe procedures through evaluation of evidence, damage, or deterioration of explosive ordnance.

Prepares technical intelligence reports.

Conducts instruction to military and civilian audiences on sabotage devices, explosive safety, and other matters relating to the EOD mission.

Performs administrative and supervises functions pertaining to supply, security, personnel, training and management.

Conducts liaison with civil, and federal authorities, civil defense agencies, supporting or supported military units.

Assumes command of unit in absence of unit commander.

Supervises one or more response teams.

Supervises and inspects subordinate EOD units.

2. Additional Skills Taught in the unit.

Defense against enemy attack

Marksmanship

Land Navigation

First aid

Common soldiering skills

J. TASK PERFORMANCE INFORMATION: (Data source is test and evaluations conducted by TRADOC and FORSCOM)

1. These tasks are high drivers in terms cost and resources:
   a. Access and Recovery (Rigging and Digging)
   b. Tactical Training
   c. Emergency Contamination Control Station
   d. Emergency Personnel Decontamination Station
   e. Initial EOD Training (26 weeks)
   f. Ratio of vehicles versus authorized equipment (TOE and CTA)
   g. Additional required training as: Supply SGT; Administrative NCO; Maintenance NCO; Training NCO; Publications Specialist; Security NCO

2. Frequently made errors in operations or mission
   a. Protective works
   b. Safety distance for explosives
   c Identify us land mines and components
   d. Prepare T-290A for operation
   e. Operate ECCS
   f. Prepare ECCS
   g. Store hazardous materiel
   h. Transport hazardous materiel
   i. Chemical operations

55X T30

TARGET AUDIENCE DESCRIPTION
MOS 55X

A. CURRENT AND PROSECTED FORCE STRUCTURE

E7	SL40	113	98	110	111	111
E6	SL30	97	93	90	91	91

B. STANDARDS OF GRADE AUTHORILATIOUS

DUTY POSITION	CODE	RANK
Ammunition Inspector	55X30	SSG
Ammunition Inspection Sergeant	55X30	SSG
Ammunition Inspector Advisor/Chief Ammunition Inspector	55X40	SFC

C. MOS/CIVILIAN DESIGNATION AND DESCRIPTION

1. Operator MOS 55X Ammunition Inspector
2. Additional Skill Identities: P5 Master Fitness Trainer
3. Security Clearance: SECRET
4. Job Description:

a. 55X30: Determines rate and degree of determination and related safety hazards as affect by conditions at storage, handling transportation and maintenance.

b. 55X40: Performs duties shown in preceeding level of skill and provides technical quidnance to lower grade personnel in these duties. Writes safety requirements for standard operating procedures and waivers of ammunition and quantity distance in accordance with regulations. Coordinates surveillance activities with civilian ammunition inspections channels.

D. ANTHROPOMETRIC DATA:

1. Shoulder Height, Standing	133.6 to 154.2cm
2. Shoulder Height, Sitting	54.2 to 65.4cm
3. Shoulder Height, Kneeling	86.1 to 95.6cm
4. Functional Arm Reach	72.6 to 90.9cm

E. PHYSICAL QUALIFICATIONS

1. Non-Allergic to Explosive Compositions
2. PLUHES 222221
3. [illegible]
4. Vision:
   a. Color: Normal color vision
   b. Activity: Normal vision correctable

F. APTITUDE DESCRIPTION OF THE TARAGET POPULATION

Enc 2

1. AFQT MENTAL CATEGORY DISTRIBUTION TOTAL FORCE GRADES E6 AND E7%

	CY
I	5.5
II	13.7
IIIA	24.6
IIIB	37.7
IV	18.6

2. Quality Distribution - USAREC Annual Production and Goals (%)

1-111A	47%
IIIB	35%
IV	18%

3. AFOT MEM Score 105

4. Prerequisite Area Aptitude Score:
a. A qualifying score in aptitude area GM.
b. Aptitude area entry level score GM 45.
c. Aptitude area score distribution (GM) %.

75-79	2.4%
80-84	0
85-89	6.1
90-94	13.4
95-99	25.6
100-104	14.6
105-109	17.1
110-114	6.1
115-119	3.7
120-124	3.7
125-160	7.3

5. Target Reading Gender Level:

SL3	12
SL4	12

6. Relates Civilian Occupations:

a. Inspector II (Ammunition) 737.367-010
b. Renovation Plant Supervisor G94-132-010
c. Ammunition Loading Inspector WG6505
d. Powder and Explosives Inspector WR6507
e. Surveillance Inspector WG6514

G. DEMOGRAPHIC INFORMATION

1. Civilian Education %

	CY

HSG	52.5
GED	19.5
NON HSGS	0
COLLEGE	28.

2. Percentage with English as a Second Language: 6.1

3. Gender Mix

MALES	FEMALES
90.8	9.2

H. MILITARY EXPERIENCE

AIT Graduates (MOS 55R, 55B, 55D, 55G)
Basic and advanced noncommissioned officers courses
NCO Logistics course

I. SKILLS AND KNOWLEDGE HANDLING OPERATIONS AND WORK AREAS

1. Inspects ammunition handling operations and work areas.

2. Evaluates safety procedures and work quality.

3. Recommends and implements corrective actions as necesary.

4. Inspects incoming and outgoing ammunition shipments and transportation equipment for presence of sabotage devices, correctness of contents and established safety prodedures.

5. Inspects magazines, storage sites, building, and surrounding areas.

6. Performs in-storage ammunition monitoring proccedures.

7. Inspects operating lines, destuct in site.

8. Serves as technical advisor on ammunition survellance and safety matters.

9. Maintains and operates ammunition inspection areas.